ORIGINAL TO GENERAL FILES

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

OFFICE OF DESIGN POLICY & SUPPORT
INTERDEPARTMENTAL CORRESPONDENCE

FILE P.I. #0000314
STP00-0000-00(314)
GDOT District 4 - Tifton
Irwin/Turner Counties
SR 107 from CR 250/Turner County to CR 264/Irwin County

OFFICE Design Policy & Support

DATE February 20, 2012

FROM Kim Phillips for Brent Story, State Design Policy Engineer

TO SEE DISTRIBUTION

SUBJECT **APPROVED REVISED CONCEPT REPORT**

Attached is the approved Revised Concept Report for the above subject project.

Attachment

DISTRIBUTION:

Genetha Rice-Singleton, Program Control Administrator
Bobby Hilliard, State Program Delivery Engineer
Cindy VanDyke, State Transportation Planning Administrator
Angela Robinson, Financial Management Administrator
Glenn Bowman, State Environmental Administrator
Ben Rabun, State Bridge Engineer
Kathy Zahul, State Traffic Engineer
Georgene Geary, State Materials & Research Engineer
Lisa Myers, Acting State Project Review Engineer
Jeff Baker, State Utilities Engineer
Ken Thompson, Statewide Location Bureau Chief
Michael Henry, Systems & Classification Branch Chief
Joe Sheffield, District Engineer
Brent Thomas, District Preconstruction Engineer
Tim Warren, District Utilities Engineer
Peter Emmanuel, Project Manager
BOARD MEMBER - 8th Congressional District

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA
REVISED PROJECT CONCEPT REPORT

Project Type:	Widening	**P.I. Number:**	0000314
GDOT District:	Tifton - D4	**County:**	Turner & Irwin
Federal Route Number:	None	**State Route Number:**	107

To reduce construction costs, right of way limits and environmental impacts, the following is proposed as suggested from the Value Engineering Study: Modifications of the typical section by means of 1) Reducing the median width from 44' to 32', 2) Reducing the inside travel lane from 12' to 11' and 3) Reducing the paved shoulder width from 6.5' to 4'.

Submitted for approval:

McGee Partners, Inc. Consultant Designer and Firm	1/12/2012 DATE
Bobby Hilliard Office Head / State Program Delivery Engineer	1/18/2012 DATE
 GDOT Project Manager	1/18/2012 DATE

Recommendation for approval:

** Glenn Bowman / MDH State Environmental Administrator	1/27/2012 DATE
** Ben Raben / MDH State Bridge Design Engineer	1/19/2012 DATE

The concept as presented herein and submitted for approval is consistent with that which is included in the Regional Transportation Plan (RTP) and/or the State Transportation Improvement Program (STIP).

* Cynthia L. Vanke State Transportation Planning Administrator	1-27-12 DATE

** Recommendation on file - MDH

* THIS REVISED CONCEPT IS BEING SIGNED WITH THE UNDERSTANDING THAT THE PRESENTED CONCEPT IS NOT INCLUDED IN THE CURRENTLY APPROVED FY 12 - FY 15 STIP

PLANNING, APPROVED CONCEPT, & BACKGROUND DATA

Project Justification Statement:

State Route 107 (SR 107) is an east-west corridor located in southern Georgia and provides a connection from Interstate 75 (I-75) eastward to the City of Fitzgerald through Turner, Irwin and Ben Hill Counties. Existing SR 107 consists of two 12-foot lanes with unpaved rural shoulders. The section of SR 107 is functionally classified as a rural major collector and is also on a Surface Transportation Assistance Act (STAA) route which allows large trucks to operate on the Interstate and certain primary routes collectively called the National Network.

The proposed project was developed in consideration with plans, studies, and projects for the region. Comprehensive plans for the counties along the corridor were referenced and considered during project development. These include the 2025 Greater Turner County Comprehensive Plan, the 2015 Greater Irwin Comprehensive Plan, and the 2025 Fitzgerald/Ben Hill County Comprehensive Plan.

An evaluation of the existing roadway revealed deficiencies in horizontal and vertical alignment. Approximately 14 percent of this 7.1 mile project has sight distance deficiencies. There are two intersections that do not provide required intersection sight distance for the posted speed of 55 mph and one vertical curve that does not meet stopping sight distance for 55 mph. The narrow existing two-lane section with unpaved rural shoulders also results in insufficient storage capacity to allow slower moving farming equipment or trucks to shift and allow faster moving traffic to pass. There are no paved shoulders or flush medians that could be utilized as temporary storage capacity for these slow moving vehicles.

PI No. 0000314 is one of three projects that are proposed to improve SR 107 from I-75 to SR 11/US 129 in Fitzgerald, Georgia. PI No. 0000311 begins at I-75 and continues to CR 250/Waterloo Highway, for a project length of 7.9 miles. This project, PI No. 0000314, begins at CR 250/Waterloo Highway and ends at CR 264/Cleveland Road/Jeff Davis Road, a distance of approximately 7.1 miles. Finally, PI No. 0000313 begins at CR 264/Cleveland Road/Jeff Davis Road and ends at SR 11/US 129 in Fitzgerald, Georgia with a project length of approximately 10.5 miles. The western terminus of the corridor is I-75, beginning at the new northbound ramp junction of I-75 and SR 107/SR 112. The interchange at I-75 and SR 107/SR 112 is currently being reconstructed [Project NHS00-0000-00(804), PI No. 0000804]. The eastern terminus of the corridor is SR 11/US 129 on the south side of the City of Fitzgerald. SR 11/US 129 is a major north-south regional roadway containing four-lanes and is a major destination for traffic traveling along the SR 107 corridor. The Logical Termini determination for the corridor is included in the Environmental Assessment prepared for the corridor.

One of the state routes in the regional transportation network, SR 32, is under consideration for the Governor's Road Improvement Program (GRIP). SR 32 is located south of SR 107, and generally parallels SR 107. Because of the many environmental constraints, this section of SR 32 is likely to remain a narrow two lane facility with minimal roadway shoulder area. These two corridors (SR 32 and SR 107) were included in a study prepared for Georgia Department of Transportation (GDOT) to compare the viability of these two parallel routes to accomplish the desired need for the area. This

information was included in the "Project Alternatives Investigation, SR 32 Widening from I-75 to Douglas" prepared by Clark Patterson Lee for GDOT, dated July 2008. A copy of the study is on file with GDOT.

The project would improve the corridor for the purpose of enhancing goods movement and promoting area economic development. The corridor would be improved by correcting existing geometric deficiencies and reducing crash frequency and severity. Widening the corridor to a four lane section will improve operation by providing opportunities for vehicles to pass slower moving farming equipment.

Description of the approved concept: This project is situated between projects STP00-0000-00(311) which proposes to widen SR 107 from I-75 in the city of Ashburn to Waterloo and Rebecca Highway (CR 250) in Turner County, and STP00-0000-00(313) which will widen SR 107 from Cleveland/Jeff Davis Road (CR 264) to SR 11/SR 90/US129 in Irwin and Ben Hill Counties and the city of Fitzgerald. The existing roadway consists of 2 - 12' lanes with graded shoulders. Additionally, a three-lane section, which stretches from just west of the intersection with Truman Road/Big Creek Road (CR 118) to just west Cleveland Road/Jeff Davis Road (CR 264), allows vehicles traveling both eastbound and westbound to pass slower moving vehicles. The proposed project would widen approximately 7.1 miles of SR 107 to a 4-lane roadway with a 44' depressed median that separates eastbound and westbound traffic. A 6' inside shoulder with 2' paved as well as 10' outside shoulder with 6.5' paved will be provided. Two bridges along the project, one over Deep Creek and the other over the Alapaha River, will be replaced with four bridges, each direction of travel will have a separate bridge. Left and right turning lanes will be placed at all median openings or any other location where they are warranted. Additional median openings that are not adjacent to a roadway intersection will also be provided; however, these locations will be determined based on driveways and proximity to intersection openings.

PDP Classification: ☒ Major ☐ Minor

Federal Oversight: ☐ Full Oversight ☒ Exempt ☐ State Funded ☐ Other

Projected Traffic as shown in the approved Concept Report:

Open Year (2012): 2150 Design Year (2032): 3400

Updated Traffic:

Open Year (2016): 2300 Design Year (2036): 2900

Functional Classification (Mainline): Rural Major Collector

VE Study anticipated: ☐ No ☐ Yes ☒ Completed – Date: August 21, 2009

PROPOSED REVISIONS

Approved Features:	Proposed Features:
• Typical Section: o Four 12' lanes o 44' depressed median with 2' paved inside shoulders o 10' outside shoulders with 6.5' paved o Left and right turn lanes provided where warranted	• Typical Section: o Four lanes, 11’ inside lanes and 12’ outside lanes o 32' depressed median with 2' paved inside shoulders o 10' outside shoulders with 4' paved o Left and right turn lanes provided where warranted o A transition from 11’ inside lanes to match 12’ inside lanes at PI 0000313 will be constructed west of Cleveland Road/Jeff Davis Road (CR 264) at the eastern termini of PI 0000314
Reason(s) for change: The above changes are part of the implementation of the Value Engineering Study for this project which will reduce construction costs, right of way limits and environmental impacts.	

ENVIRONMENTAL

Air Quality:

Is the project located in a PM 2.5 Non-attainment area? ☒ No ☐ Yes
Is the project located in an Ozone Non-attainment area? ☒ No ☐ Yes

An Air Quality Assessment will be prepared to discuss impacts to air quality from the project, specifically PM 2.5, ozone, carbon monoxide, and Mobile Source Air Toxics (MSAT). No mitigation is anticipated as a result of adverse effects to air quality from the project.

Potential environmental impacts of proposed revision: This revision proposes a narrower typical section and avoids relocation of four intersecting roadways; therefore, the potential environmental impacts are reduced. It is anticipated that this revision will have a minor effect on the environment/project schedule.

Have proposed revisions been reviewed by environmental staff? ☐ No ☒ Yes

Environmental responsibilities (Studies/Documents/Permits): Consultant will be responsible for performing most of the additional work. Responsibilities by study are as follows:

NEPA: Consultant will update the draft Environmental Assessment to reflect the revised special studies.

Ecology: Consultant will update ecological studies and conduct surveys for all threatened and endangered species except Gopher Tortoise and Eastern Indigo Snake. GDOT will survey for the Gopher Tortoise and the Eastern Indigo Snake.

Archeology: Consultant will update archeology studies.

History: Consultant will update the history survey and the Assessment of Effects since the existing history survey will expire in February 2012.

Air/Noise: Consultant will update the Air/Noise analyses to reflect new standards and updated traffic data.

Public Involvement: There will be no additional public outreach required as a result of this revision.

PROJECT COST & ADDITIONAL INFORMATION

Updated Cost Estimate		Date of Estimate
Base Construction Cost:	$ 26,599,135.86	1/12/2012
Engineering and Inspection:	$ 1,329,956.79	1/12/2012
Liquid AC Adjustment:	$ 2,029,669.37	1/12/2012
Total Construction Cost:	$ 29,958,762.02	1/12/2012
Right-of-Way:	$ 4,208,000.00	1/4/2012
Utilities (reimbursable costs):	$ 704,000.00	12/19/2011
Environmental Mitigation:	$ 1,927,000.00	12/22/2011
TOTAL PROJECT COST:	**$ 36,797,762.02**	1/12/2012

Recommendation: Recommend that the proposed revision to the concept be approved for implementation.

Comments: SR 107 is not an existing or proposed bike route within the limits of this project.

Attachments:

1. Sketch map
2. Cost Estimates
    a. Construction
    b. Liquid AC Adjustment
    c. Right of Way
    d. Utilities
    e. Environmental Mitigation
3. Typical Sections
4. Technical Memorandum SR 107 Widening Project
5. Concept Layout
6. Value Engineering Study Implementation Letter

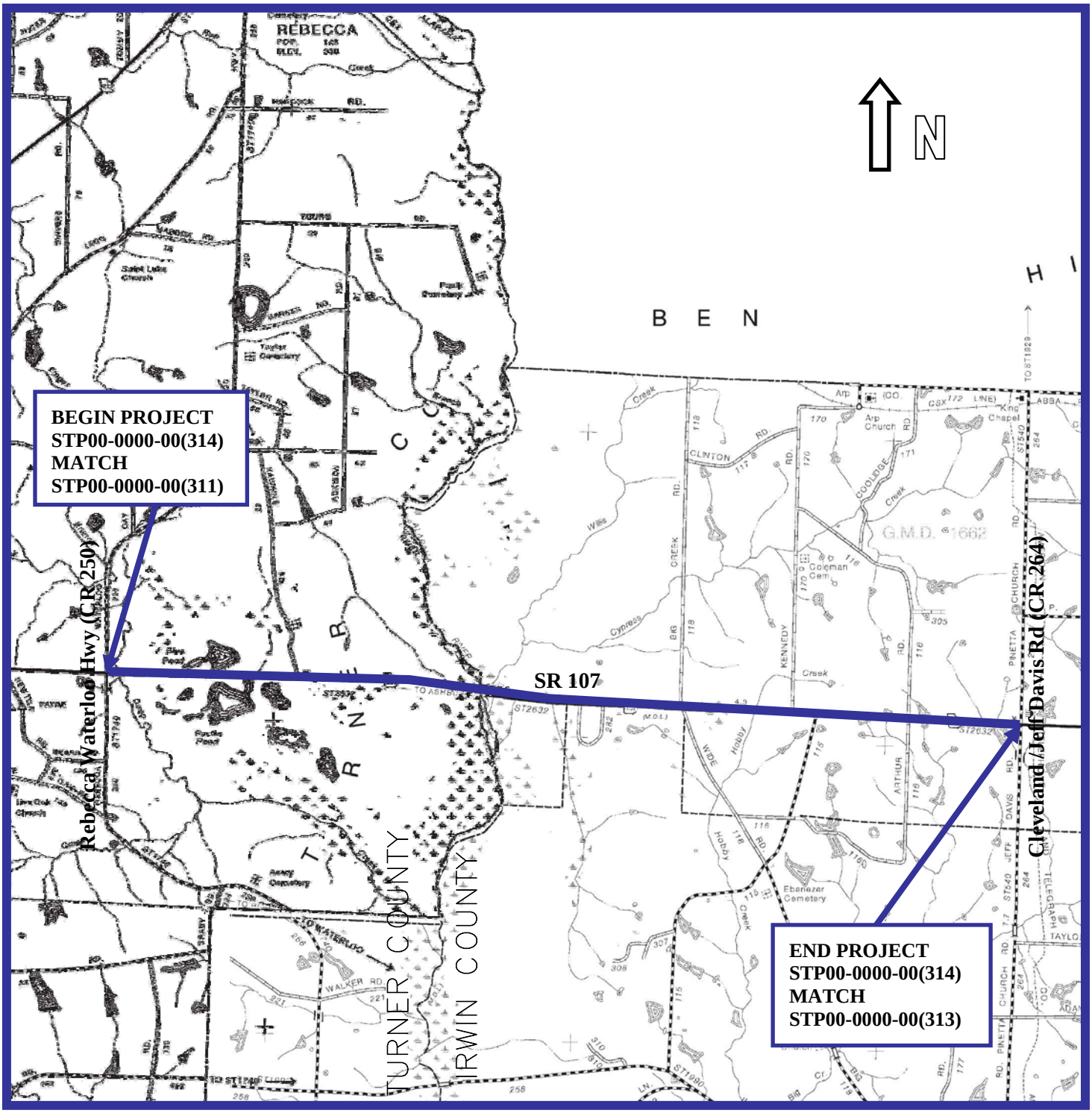
APPROVALS

Concur: _____
Director of Engineering

Approve: _____ 2-17-12
Chief Engineer Date

Location Map

STP00-0000-00(314), P.I. 0000314
SR 107 From CR 250 to CR 264
Turner and Irwin Counties



STATE HIGHWAY AGENCY

DATE : 01/12/2012
PAGE : 1

JOB ESTIMATE REPORT

JOB NUMBER : 0000314 SPEC YEAR: 01
DESCRIPTION: SR 107 FROM CR 250 TO CR 264

ITEMS FOR JOB 0000314

LINE	ITEM	UNITS	DESCRIPTION	QUANTITY	PRICE	AMOUNT
0005	150-1000	LS	TRAFFIC CONTROL - STP00-0000-00(314)	1.000	1172000.00	1172000.00
0010	153-1300	EA	FIELD ENGINEERS OFFICE TP 3	1.000	75080.38	75080.38
0015	207-0203	CY	FOUND BKFILL MATL, TP II	310.000	44.61	13829.74
0020	210-0100	LS	GRADING COMPLETE - STP00-0000-00(314)	1.000	5255000.00	5255000.00
0025	310-1101	TN	GR AGGR BASE CRS, INCL MATL	116000.000	15.55	1804536.60
0030	318-3000	TN	AGGR SURF CRS	700.000	20.17	14119.64
0035	402-1812	TN	RECYL AC LEVELING,INC BM&HL	24400.000	71.48	1744147.62
0040	402-3121	TN	RECYL AC 25MM SP,GP1/2,BM&HL	39900.000	60.76	2424584.55
0045	402-3130	TN	RECYL AC 12.5MM SP,GP2,BM&HL	25400.000	65.25	1657556.25
0050	402-3190	TN	RECYL AC 19 MM SP,GP 1 OR 2 ,INC BM&HL	24800.000	63.59	1577055.56
0055	413-1000	GL	BITUM TACK COAT	29700.000	2.41	71808.07
0060	433-1200	SY	REF CONC APPR SL/I SLOPED EDGE	1030.000	141.89	146153.56
0065	441-0301	EA	CONC SPILLWAY, TP 1	16.000	1620.86	25933.86
0070	500-3101	CY	CLASS A CONCRETE	380.000	420.62	159838.84
0075	500-3200	CY	CL B CONC	5.000	514.56	2572.84
0080	500-3800	CY	CL A CONC, INCL REINF STEEL	300.000	871.19	261358.72
0085	511-1000	LB	BAR REINF STEEL	34700.000	0.73	25622.13
0090	550-1180	LF	STM DR PIPE 18",H 1-10	13000.000	27.42	356474.69
0095	550-1240	LF	STM DR PIPE 24",H 1-10	520.000	38.33	19932.70
0100	550-1300	LF	STM DR PIPE 30",H 1-10	870.000	44.44	38671.26
0105	550-1360	LF	STM DR PIPE 36",H 1-10	1600.000	48.41	77471.78
0110	550-1480	LF	STM DR PIPE 48",H 1-10	530.000	93.26	49432.73
0115	550-2180	LF	SIDE DR PIPE 18",H 1-10	3500.000	24.26	84926.63
0120	550-2240	LF	SIDE DR PIPE 24",H 1-10	570.000	25.99	14819.24
0125	550-3618	EA	SAFETY END SECTION 18",SD,6:1	110.000	403.25	44357.86
0130	550-3624	EA	SAFETY END SECTION 24",SD,6:1	18.000	763.38	13740.99
0135	576-1018	LF	SLOPE DRAIN PIPE, 18 IN	1360.000	30.61	41636.18
0140	577-1100	EA	METAL DR INLET - CMPLT ASSMBLY	8.000	1154.81	9238.53
0145	634-1200	EA	RIGHT OF WAY MARKERS	120.000	89.49	10739.19
0150	641-1100	LF	GUARDRAIL, TP T	240.000	46.16	11079.96
0155	641-1200	LF	GUARDRAIL, TP W	5400.000	14.18	76590.20
0160	641-5001	EA	GUARDRAIL ANCHORAGE, TP 1	14.000	582.03	8148.43
0165	641-5012	EA	GUARDRAIL ANCHORAGE, TP 12	18.000	1675.82	30164.82
0169	643-8200	LF	BARRIER FENCE (ORANGE), 4 FT	30000.000	1.83	55130.70
0170	668-2100	EA	DROP INLET, GP 1	130.000	1531.88	199144.54

0175	668-8011	SF	SAFETY GRATE, TP 1	2200.000	32.26	70972.00
0180	668-8012	SF	SAFETY GRATE, TP 2	180.000	40.89	7360.20
0185	668-8013	SF	SAFETY GRATE, TP 3	400.000	41.95	16780.00
0190	668-8014	SF	SAFETY GRATE, TP 4	250.000	44.58	11145.84
0195	603-2182	SY	STN DUMPED RIP RAP, TP 3, 24"	660.000	47.12	31100.35
0200	603-7000	SY	PLASTIC FILTER FABRIC	660.000	3.71	2455.17
0205	700-6910	AC	PERMANENT GRASSING	108.000	735.78	79464.46
0210	700-7000	TN	AGRICULTURAL LIME	490.000	46.79	22928.81
0220	700-8000	TN	FERTILIZER MIXED GRADE	76.000	428.09	32534.93
0225	700-8100	LB	FERTILIZER NITROGEN CONTENT	5400.000	2.09	11317.91
0230	710-9000	SY	PERM SOIL REINFORCING MAT	22300.000	2.91	64963.69
0235	716-2000	SY	EROSION CONTROL MATS, SLOPES	21400.000	1.13	24210.25
0240	163-0232	AC	TEMPORARY GRASSING	54.000	180.35	9739.12
0245	163-0240	TN	MULCH	2100.000	137.50	288759.81
0250	163-0300	EA	CONSTRUCTION EXIT	9.000	995.62	8960.63
0255	163-0501	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 1	3.000	458.85	1376.57
0260	163-0503	EA	CONSTR AND REMOVE SILT CONTROL GATE,TP 3	98.000	438.78	43000.90
0265	163-0531	EA	CONSTR & REM SEDIMENT BASIN,TP 1,STA NO- MULTIPLE	10.000	7467.97	74679.71
0270	163-0550	EA	CONS & REM INLET SEDIMENT TRAP	130.000	233.66	30376.58
0275	165-0030	LF	MAINT OF TEMP SILT FENCE, TP C	17300.000	0.68	11843.75
0280	165-0060	EA	MAINT OF TEMP SEDIMENT BASIN,STA NO -	20.000	1098.22	21964.59
0285	165-0085	EA	MAINT OF SILT CONTROL GATE, TP 1	3.000	129.27	387.83
0290	165-0087	EA	MAINT OF SILT CONTROL GATE, TP 3	98.000	69.52	6813.63
0295	165-0101	EA	MAINT OF CONST EXIT	9.000	333.47	3001.27
0300	165-0105	EA	MAINT OF INLET SEDIMENT TRAP	130.000	55.10	7163.17
0305	167-1000	EA	WATER QUALITY MONITORING AND SAMPLING	2.000	357.63	715.28
0310	167-1500	MO	WATER QUALITY INSPECTIONS	24.000	704.62	16910.89
0315	171-0030	LF	TEMPORARY SILT FENCE, TYPE C	34500.000	2.75	94960.22
0320	636-1020	SF	HWY SGN,TP1MAT,REFL SH TP3	470.000	12.70	5971.06
0325	636-1033	SF	HWY SIGNS, TP1MAT,REFL SH TP 9	360.000	15.71	5658.07
0330	636-2070	LF	GALV STEEL POSTS, TP 7	850.000	5.88	4999.62
0335	653-0120	EA	THERM PVMT MARK, ARROW, TP 2	60.000	71.34	4280.44
0340	653-1501	LF	THERMO SOLID TRAF ST 5 IN, WHI	95700.000	0.28	27288.86
0345	653-1502	LF	THERMO SOLID TRAF ST, 5 IN YEL	92600.000	0.28	26253.95
0350	653-1704	LF	THERM SOLID TRAF STRIPE,24",WH	340.000	3.87	1318.72
0355	653-3501	GLF	THERMO SKIP TRAF ST, 5 IN, WHI	80000.000	0.20	16780.00
0360	653-6004	SY	THERM TRAF STRIPING, WHITE	5300.000	2.71	14411.02
0365	653-6006	SY	THERM TRAF STRIPING, YELLOW	590.000	2.97	1754.80
0370	654-1001	EA	RAISED PVMT MARKERS TP 1	240.000	3.56	855.78
0375	654-1003	EA	RAISED PVMT MARKERS TP 3	1100.000	3.20	3525.35
0380	657-1054	LF	PRF PL SD PVMT MKG,5",WH,TP PB	2000.000	3.66	7325.50
0385	657-3054	GLF	PRF PL SK PVMT MKG,5",WH,TP PB	2000.000	2.41	4820.20
0390	657-6054	LF	PRF PL SD PVMT MKG,5",YW,TP PB	2000.000	3.65	7306.14
0395	543-9000	LS	CONSTR OF BRIDGE COMPLETE - NO. 1	1.000	2289400.00	2289400.00
0400	543-9000	LS	CONSTR OF BRIDGE COMPLETE - NO. 2	1.000	2289400.00	2289400.00
0405	543-9000	LS	CONSTR OF BRIDGE COMPLETE - NO. 3	1.000	1659500.00	1659500.00
0410	543-9000	LS	CONSTR OF BRIDGE COMPLETE - NO. 4	1.000	1659500.00	1659500.00
ITEM TOTAL						26599135.82

INFLATED ITEM TOTAL	26599135.82

TOTALS FOR JOB 0000314

ESTIMATED COST:	26599135.86
CONTINGENCY PERCENT (0.0):	0.00
ESTIMATED TOTAL:	26599135.86

PROJ. NO.	STP00-0000-00(314)
P.I. NO.	0000314
DATE	1/12/2012

CALL NO.

INDEX (TYPE)	DATE	INDEX
REG. UNLEADED	Jan-12	$ 3.297
DIESEL		$ 3.818
LIQUID AC		$ 578.00

Link to Fuel and AC Index:
http://www.dot.ga.gov/doingbusiness/Materials/Pages/asphaltcementindex.aspx

LIQUID AC ADJUSTMENTS

PA=[((APM-APL)/APL)]xTMTxAPL

Asphalt

Price Adjustment (PA)				**1985430**	**$ 1,985,430.00**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	924.80	
Monthly Asphalt Cement Price month project let (APL)			$	578.00	
Total Monthly Tonnage of asphalt cement (TMT)				5725	

ASPHALT	Tons	%AC	AC ton
Leveling	24400	5.0%	1220
12.5 OGFC		5.0%	0
12.5 mm	25400	5.0%	1270
9.5 mm SP		5.0%	0
25 mm SP	39900	5.0%	1995
19 mm SP	24800	5.0%	1240
	114500		**5725**

BITUMINOUS TACK COAT

Price Adjustment (PA)			**$**	**44,239.37**	**$ 44,239.37**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	924.80	
Monthly Asphalt Cement Price month project let (APL)			$	578.00	
Total Monthly Tonnage of asphalt cement (TMT)				127.5644974	

Bitum Tack Gals	gals/ton	tons
29700	232.8234	127.564497

PROJ. NO.	STP00-0000-00(314)		CALL NO.
P.I. NO.	0000314		
DATE	1/12/2012		

BITUMINOUS TACK COAT (surface treatment)

Price Adjustment (PA)				**0**	**$ -**
Monthly Asphalt Cement Price month placed (APM)	Max. Cap	60%	$	924.80	
Monthly Asphalt Cement Price month project let (APL)			$	578.00	
Total Monthly Tonnage of asphalt cement (TMT)				0	

Bitum Tack	SY	Gals/SY	Gals	gals/ton	tons
Single Surf. Trmt.		0.20	0	232.8234	0
Double Surf.Trmt.		0.44	0	232.8234	0
Triple Surf. Trmt		0.71	0	232.8234	0
					0

TOTAL LIQUID AC ADJUSTMENT	**$**	**2,029,669.37**

GEORGIA DEPARTMENT OF TRANSPORTATION
PRELIMINARY ROW COST ESTIMATE SUMMARY

Date: 1/4/2012
Revised:

Project: STP-0000-00(314)
County: Turner/Irwin
PI: 0000314

Description: SR 107 from CR 250 to CR 264
Project Termini: SR 107 from CR 250 to CR 264

Existing ROW: Varies
Required ROW: Varies

Parcels: 46

Land and Improvements		$3,352,500.00
Proximity Damage	*$0.00*	
Consequential Damage	*$0.00*	
Cost to Cures	*$0.00*	
Trade Fixtures	*$0.00*	
Improvements	*$1,250,000.00*	
Valuation Services		$57,500.00
Legal Services		$293,550.00
Relocation		$92,000.00
Demolition		$25,000.00
Administrative		$387,000.00
TOTAL ESTIMATED COSTS		$4,207,550.00
TOTAL ESTIMATED COSTS (ROUNDED)		***$4,208,000.00***

Preparation Credits	Hours	Signature

Prepared By: LaShone Alexander CG#: 2860999 01/04/2012
Approved By: LaShone Reynolds CG#: 2860999 01/04/2012

NOTE: No Market Appreciation is included in this Preliminary Cost Estimate

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI STP-0000-00(314) Turner/Irwin 0000314

		A	B	C	D
	Land and Improvements	**Agriculture**	**Residential**	**Commercial**	**Industrial**
1	Estimate Low (ac)	$0.00	$0.00	$0.00	$0.00
2	Estimate High (ac)	$0.00	$0.00	$0.00	$0.00
3	Estimate Used (ac)	$10,000.00	$0.00	$0.00	$0.00
4	Fee Simple Area (ac)	97.00	0.00	0.00	0.00
5	Fee Simple Estimate	$970,000.00	$0.00	$0.00	$0.00
6	Perm Esmt Area (ac)	3.00	0.00	0.00	0.00
7	Perm Esmt Factor	50%	0%	0%	0%
8	Perm Esmt Estimate	$15,000.00	$0.00	$0.00	$0.00
9	Temp Esmt Area (ac)	0.00	0.00	0.00	0.00
10	Temp East Factor	0%	0%	0%	0%
11	Temp Esmt Estimate	$0.00	$0.00	$0.00	$0.00
12	Proximity Damages	$0.00	$0.00	$0.00	$0.00
13	Consequential Damages	$0.00	$0.00	$0.00	$0.00
14	Cost to Cures	$0.00	$0.00	$0.00	$0.00
15	Improvements	$1,250,000.00	$0.00	$0.00	$0.00
16	Trade Fixtures	$0.00	$0.00	$0.00	$0.00
17					
18	PROPERTY TYPE TOTALS	$2,235,000.00	$0.00	$0.00	$0.00
19			SUB TOTAL PROPERTY TYPES		$2,235,000.00
20			Counter Offers and Condemnation Increases		$1,117,500.00
21					
22			**GRAND TOTAL LANDS AND IMPROVEMENTS**		$3,352,500.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI STP-0000-00(314) Turner/Irwin 0000314

		A	B	C	D
	Valuation Services	**Agriculture**	**Residential**	**Commercial**	**Industrial**
1	Appraisals (# of Parcels)	46	0	0	0
2	Estimated Fees (per Parcel)	$1,000.00	$0.00	$0.00	$0.00
3	TOTAL APPRAISALS	$46,000.00	$0.00	$0.00	$0.00
4	Sign Estimates	0	0	0	0
5	Estimated Fees	$0.00	$0.00	$0.00	$0.00
6	TOTAL SIGN ESTIMATES	$0.00	$0.00	$0.00	$0.00
7	Specialty Reports	0	0	0	0
8	Estimated Fees	$0.00	$0.00	$0.00	$0.00
9	TOTAL SPECIALTY REPORTS	$0.00	$0.00	$0.00	$0.00
10	Septic/Well Reports	0	0	0	0
11	Estimated Fees	$0.00	$0.00	$0.00	$0.00
12	TOTAL SEPTIC/WELL REPORTS	$0.00	$0.00	$0.00	$0.00
13					
14					
15					
16	TOTAL VALUATION FEES	$46,000.00	$0.00	$0.00	$0.00
17			SUB TOTAL VALUATION SERVICES		$46,000.00
18			Updates and Incidentals (Min $2,500 or 25%)		$11,500.00
19			**GRAND TOTAL VALUATION SERVICES**		$57,500.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI STP-0000-00(314) Turner/Irwin 0000314

		A	B	C	D
	Legal Services	**Parcels**	**Estimated Fees**		**TOTALS**
1	Meeting with Attorney	46	$125.00		$5,750.00
2	Preliminary Titles	46	$200.00		$9,200.00
3	Closing and Final Title	46	$300.00		$13,800.00
4	Recording Fees	46	$50.00		$2,300.00
5	Condemnation Filing	7	$5,000.00		$35,000.00
6	Litigation Costs	7	$25,000.00		$175,000.00
7	Updates and Incidentials	7	$7,500.00		$52,500.00
8					
9					
10					
11					
12					
13					
14					
15					
16					
17			**GRAND TOTAL LEGAL SERVICES**		$293,550.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI STP-0000-00(314) Turner/Irwin 0000314

		A	B	C	D
	Relocation	**Displacements**	**Estimated Costs**		**TOTALS**
1	Business Displacement		$15,000.00		$0.00
2	Residential Tenant		$20,000.00		$0.00
3	Residential Owner		$40,000.00		$0.00
4	Pro-Rata Taxes	46	$1,000.00		$46,000.00
5	Property Pin Replacement	46	$1,000.00		$46,000.00
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17			**GRAND TOTAL RELOCATION**		$92,000.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI STP-0000-00(314) Turner/Irwin 0000314

		A	B	C	D
	Demolition	**Items/Improvements**	**Estimated Costs**		**TOTALS**
1	Residential Structures		$15,000.00		$0.00
2	Commercial Structures	1	$25,000.00		$25,000.00
3	Hotels/Apartments		$60,000.00		$0.00
4	UST's - Dispensers		$50,000.00		$0.00
5	Billboards		$8,000.00		$0.00
6	Signs - Light Standards		$1,500.00		$0.00
7	Water Vaults		$15,000.00		$0.00
8	Gas/Water Service Separation		$2,500.00		$0.00
9					
10					
11					
12					
13					
14					
15					
16					
17			**GRAND TOTAL DEMOLITION**		$25,000.00

Georgia Department of Transportation
Preliminary ROW Cost Estimate Worksheet

Project/County/PI STP-0000-00(314) Turner/Irwin 0000314

		A	B	C	D
	Administrative	**Parcels**	**Man hours per Parcel**		**TOTALS**
1	Pre-Acquisition	46	40		$92,000.00
2	Acquisition	46	100		$230,000.00
3	Relocation		50		$0.00
4	Administrative Appeals	12	50		$30,000.00
5	Post-Acquisition	7	100		$35,000.00
6					
7					
8					
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14					
15					
16					
17			**GRAND TOTAL INHOUSE**		$387,000.00

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE

Project No: **STP00-0000-00(314)** OFFICE: **Tifton**
County **IRWIN/TURNER** DATE: **December 19, 2011**

P.I. # **0000314**

Description: ***SR 107 FROM CR 250/TURNER COUNTY TO CR 264/IRWIN COUNTY***

FROM Tim Warren, P.E., District Utilities Engineer

TO Peter B. Emmanuel, Project Manager **(VIA-EMAIL)**

SUBJECT **UPDATED- UTILITY COST ESTIMATE**

A review of utilities located on the above referenced project has been conducted based on the latest available plans.. Listed below is a breakdown of the anticipated reimbursable and non-reimbursable cost.

Utility Owner	Reimbursable	Non-Reimbursable	Estimate Based on
Irwin Emc	$504,000.00	$585,500.00	Site Visit / Available Drawings
Mediacom	$0.00	$140,000.00	Site Visit / Available Drawings
Windstream Communications	$200,000.00	$100,000.00	Site Visit / Available Drawings
Total	$704,000.00	$825,500.00	

**** Indicates Potential Utility Aid Request from Local Gov't**

Estimate is based on the best available information at the current stage, unforeseen prior rights information may be provided by the Utility Company at a later date that could cause some non-reimbursable costs to shift to the reimbursable cost column.

If additional information is needed, please contact me or Bill Cooper, Assistant District Utilities Engineer at (229) 386-3288.

TW:BC:KC

c: Jeff Baker, P.E., State Utilities Engineer
Brent Thomas, District Preconstruction Engineer
Angela Robinson, State Financial Management Administrator

Project No.: STP00-0000-00(314)
County: Turner/Irwin

P.I. No.: 0000314

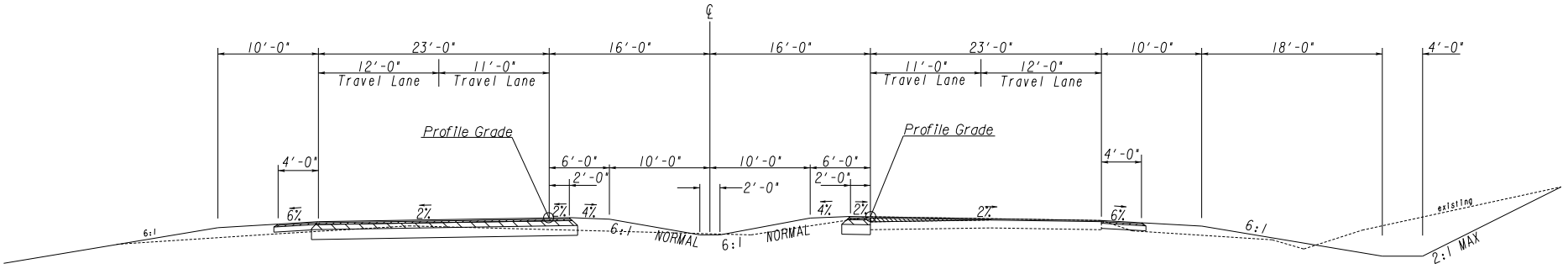
Description: SR 107 from CR 250 to CR 264

Date: 12/22/2011

Subject: Environmental Mitigation Cost Estimate

Type	Required Credits	Estimated Cost per Credit	Total Cost
Wetland	199	$7,000	$1,393,000.00
Stream	5340	$100	$534,000.00

Total Estimated Mitigation Cost: $1,927,000.00



CONCEPTUAL TYPICAL SECTIONS

SR 107

STP-0000-00(314)

P. I. NO. 0000314

TURNER/IRWIN COUNTY, GEORGIA

N. T. S.

NOVEMBER 1, 2011

TECHNICAL MEMORANDUM

SR 107 Widening Project

Turner and Irwin Counties, Georgia

STP-0000-00(311) Turner County, P.I. No. 0000311, I-75 to Waterloo & Rebecca Hwy.

STP-0000-00(314) Turner/Irwin Counties, P.I. No. 0000314, Waterloo & Rebecca Hwy. to CR 264/Jeff Davis Rd.

Prepared for:

Georgia Department of Transportation

Prepared by:

1201 Peachtree Street NE
400 Colony Square, Suite 1905
Atlanta, GA 30361
Phone: (770) 455-8555
Fax: (404) 541-9262
www.jacobs.com

October 2011

INTRODUCTION

Jacob Engineering Group, Inc. (JEG) has been retained by the Georgia Department of Transportation (GDOT) to prepare roadway construction plans for the proposed widening of State Route (SR) 107 in Turner and Irwin Counties. As part of the design process, JEG conducted an analysis of the anticipated future traffic conditions and transportation needs along the SR 107 study corridor. This technical memorandum summarizes the results of the analysis and recommended improvements.

The location of the overall SR 107 widening project is shown in Figure 1. Project STP-0000-00(311) is located on SR 107 in Turner County, Georgia. The proposed project is approximately 7.9 miles in length and is located between I-75 and Waterloo & Rebecca Highway (County Road 250), as shown in Figure 2. Project STP-0000-00(314) is located on SR 107 in Turner and Irwin Counties, Georgia. The proposed project is approximately 7.1 miles in length and is located between Waterloo & Rebecca Highway and Jeff Davis Rd (County Road 264), as shown in Figure 3. Both projects consist of widening SR 107 from two travel lanes with five-foot shoulders to a rural four-lane divided highway with a 32-foot depressed grass median from Thompson Road to Jeff Davis Road. Because of historical property concerns, the project proposes an 18-foot raised median and four travel lanes with rural shoulders (four foot paved, six foot unpaved, no curb and gutter on outside right) between I-75 and Thompson Road. This project, in conjunction with Project STP-0000-00(313), will provide four-lane access between Interstate 75 and the City of Fitzgerald. SR 107 is functionally classified as a Rural Major Collector. For the purposes of this study, SR 107 is referenced as having an east/west orientation.

Projects STP-0000-00(311) and STP-0000-00(314) were programmed to promote economic development in Ben Hill, Coffee, Dodge, Irwin, Telfair, Turner, and Wilcox Counties. SR 107 is the most direct route to the City of Fitzgerald from Interstate 75 and therefore is the most utilized route for manufacturing facilities to receive and ship goods. The existing right-of-way varies between 100 to 130 feet in width.

Peak hour traffic projections were analyzed based on the methodologies contained in the 2000 Highway Capacity Manual (HCM 2000). Based on the design year traffic projections for the corridor and the results from the capacity analysis, recommended lane geometry and traffic control needs were developed for the study area. The following paragraphs summarize the results of the analysis.

EXISTING ROADWAY CONDITIONS

SR 107 is currently a two-lane undivided roadway with five-foot shoulders and a posted speed limit of 55 miles per hour. From I-75, SR 107 and SR 112 run concurrently to the east for 3.2 miles before SR 112 splits northeast towards Rebecca and SR 107 continues east towards Fitzgerald. Figure 4 shows the southbound approach of the SR 107 at SR 112 intersection. SR 112 continues to the right of the photo (westbound direction) and merges with SR 107, shown on the left with a westbound truck. To continue east on SR 107, drivers must turn right at this intersection.

FIGURE 1: OVERALL LOCATION MAP

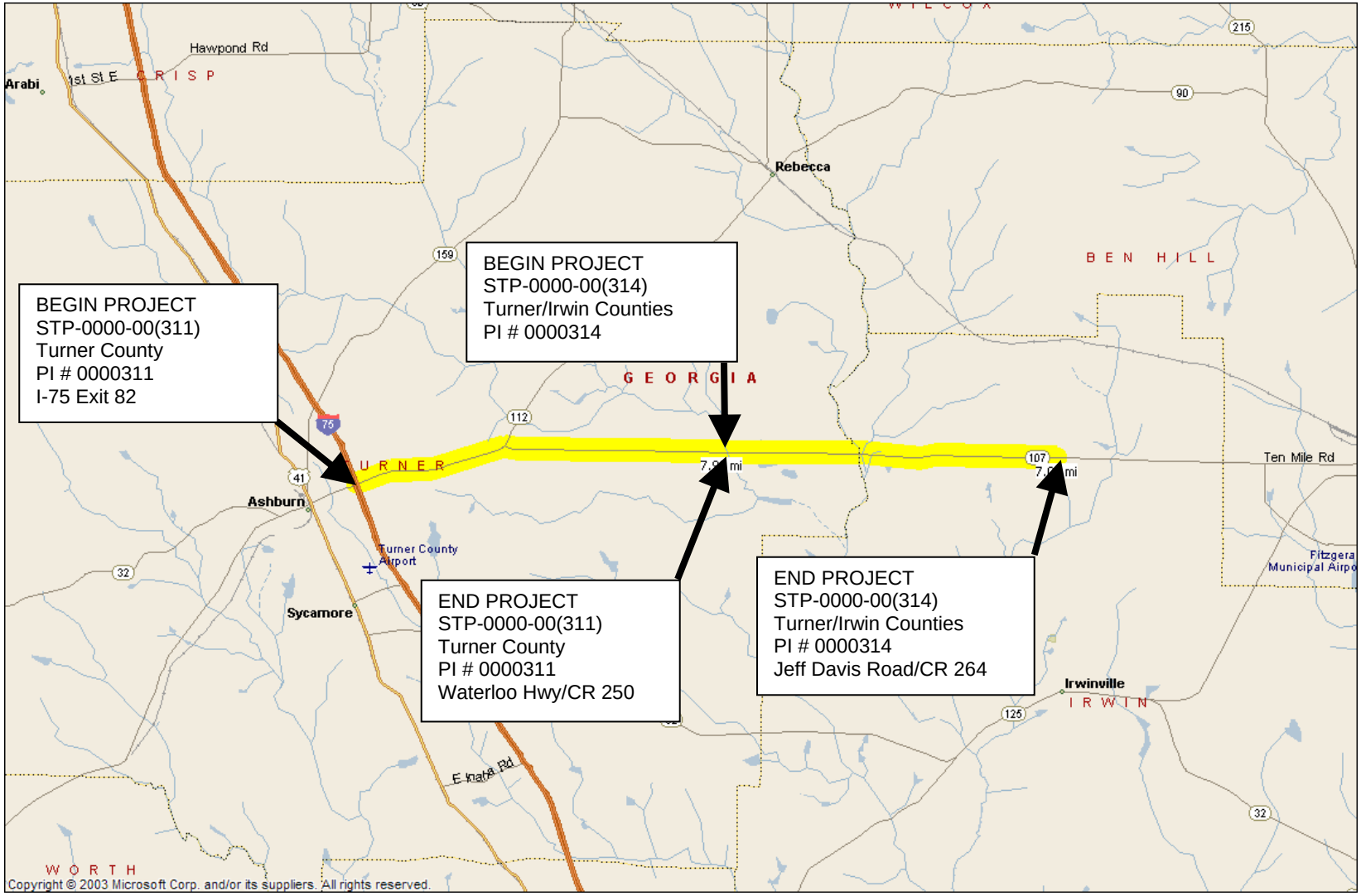


FIGURE 2: STP-0000-00(311) LOCATION MAP

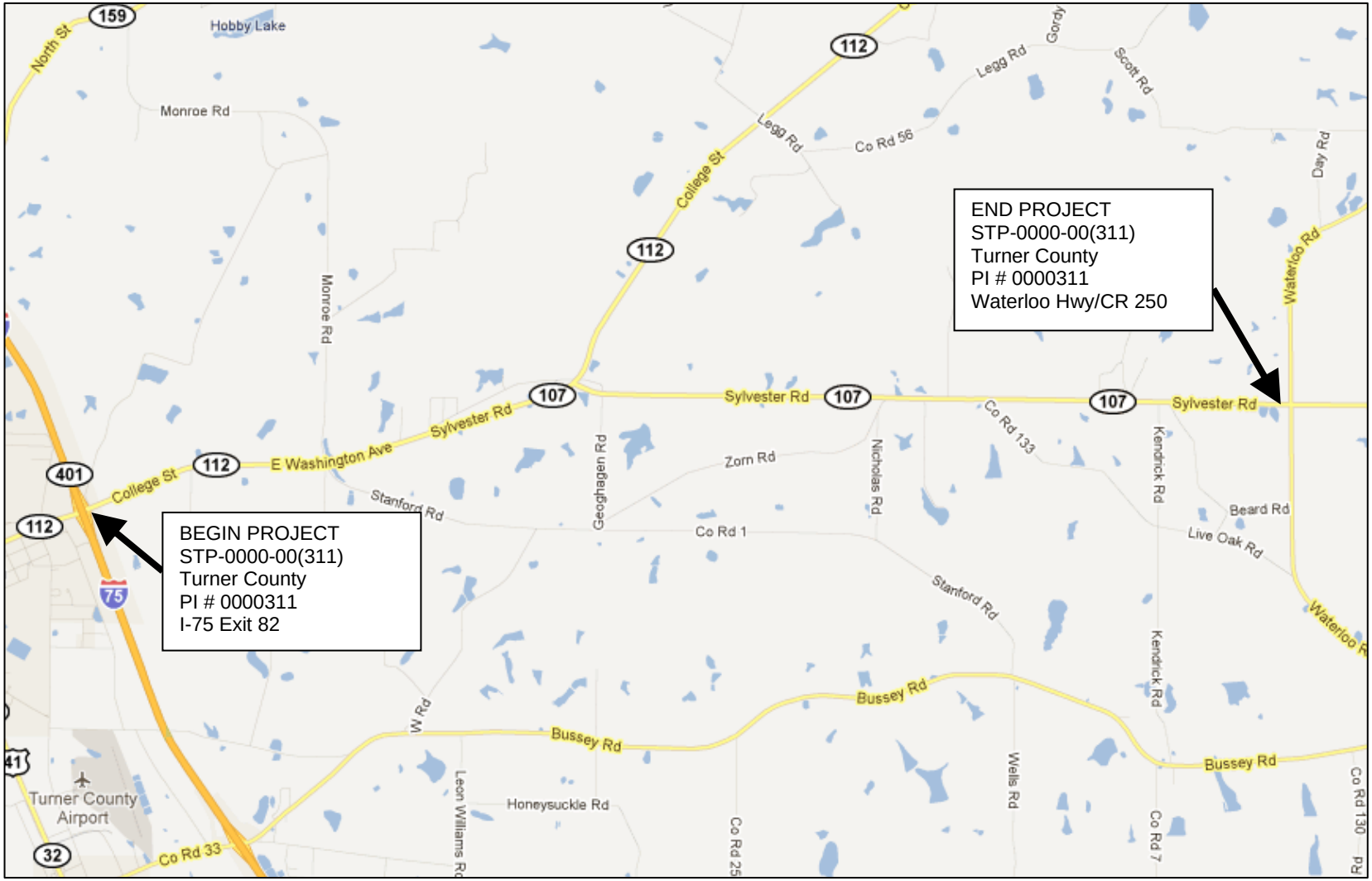


FIGURE 3: STP-000-00(314) LOCATION MAP

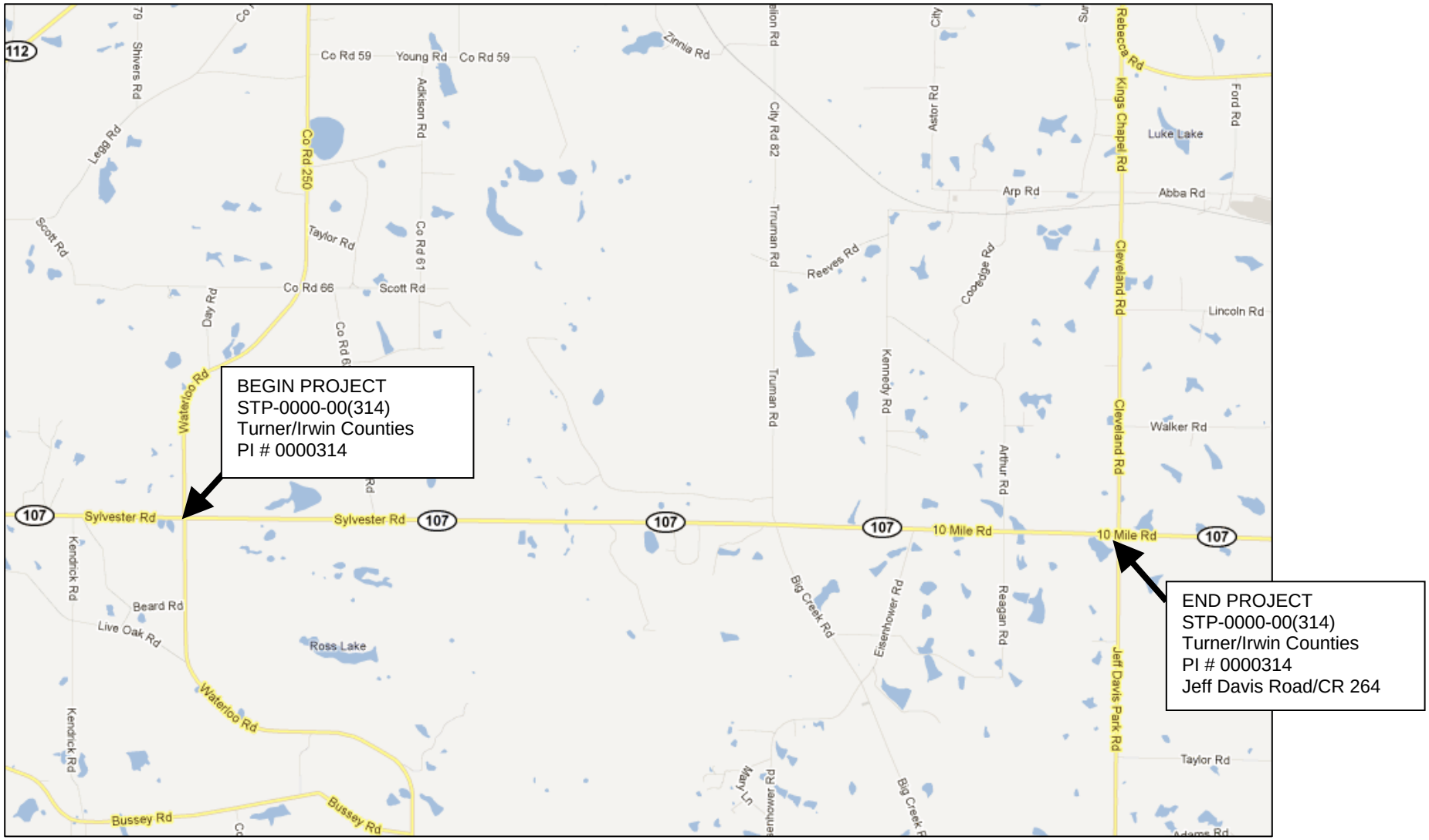


Figure 4
Intersection of SR 107 and SR 112
(Looking Southbound)

The following are three paved roads intersecting SR 107 within the limits of Project STP-0000-00(311): County Road (CR) 54/CR 1 (Monroe Road/Stanford Road), CR 243 (Jeanette Avenue), and CR 250 (Waterloo Highway). Jeff Davis Rd (CR 264) within the limits of Project STP-0000-00(314) is also paved. Additional non-paved roadways intersect SR 107 along the study corridor. The side street approaches along SR 107 are under stop sign control, except at the SR 112 intersection where the westbound SR 107 approach is stop-controlled.

Development along SR 107 within the study area is primarily rural and agricultural, though the roadway is also used by through commercial traffic heading to and from I-75. Existing 2010 traffic counts show very strong (27%) peak hour truck percentages on SR 107 and these percentages are projected to reach 30% for 2016 and 2036 future peak hour conditions.

TRAFFIC VOLUMES

Peak hour balanced traffic flow diagrams were projected for the build year (2016) and the design year (2036) by GDOT and were used for future analysis. These traffic flow diagrams are attached to this technical memorandum.

CRASH HISTORY

Crash data was compiled from the most recent three years of milepoint-specific crash data (2006, 2007 and 2008) for the SR 107 corridor from I-75 to Waterloo Highway and from Waterloo Highway to Jeff Davis Road. Table 1 shows the number of crashes recorded for each of these years, Table 2 shows the average crash rate per 100 million vehicle miles (100 MVM)

for each segment, Table 3 shows the number of crashes that resulted in injuries or fatalities, and Table 4 shows the average injury and fatality rates per 100 MVM for each segment.

Table 1
Summary of Historic Crash Data (Number of Crashes)

Project	SR 107 Segment	2006	2007	2008
STP-0000-00(311)	I-75 to Waterloo Highway	9	6	7
STP-0000-00(314)	Waterloo Highway to Jeff Davis Road	2	2	3

Table 2
Summary of Average Crash Rate

Project	SR 107 Segment	2006	2007	2008
STP-0000-00(311)	I-75 to Waterloo Highway	110	72	84
STP-0000-00(314)	Waterloo Highway to Jeff Davis Road	34	35	56
Statewide Average (Rural Major Collector)		203	203	194

Table 3
Crashes Resulting in Injuries and Fatalities

Project	SR 107 Segment	2006		2007		2008	
		INJ	FAT	INJ	FAT	INJ	FAT
STP-0000-00(311)	I-75 to Waterloo Highway	4	0	2	0	3	0
STP-0000-00(314)	Waterloo Highway to Jeff Davis Road	1	0	0	0	0	0

INJ = Injury, FAT = Fatality

Table 4
Summary of Average Injury and Fatality Rates

Project	SR 107 Segment	2006		2007		2008	
		INJ	FAT	INJ	FAT	INJ	FAT
STP-0000-00(311)	I-75 to Waterloo Highway	49	0	24	0	36	0
STP-0000-00(314)	Waterloo Highway to Jeff Davis Road	17	0	0	0	0	0
Statewide Average (Rural Major Collector)		73	3.28	72	3.24	68	3.03

INJ = Injury, FAT = Fatality

As shown in Tables 2 and 4, the average crash rates for all recorded crashes, injuries or fatalities were below the statewide average for 2006, 2007, and 2008.

EXISTING YEAR (2010) CORRIDOR LEVEL OF SERVICE

The most recent year of historical data available (2010) was collected for SR 107 from GDOT count stations along the study corridor. Table 5 summarizes the 2010 annualized average daily traffic (AADT) volume collected at each location in vehicles per day (vpd).

Table 5
2010 SR 107 AADT Volumes

TC Station	County	Description	2010 Volumes (vpd)
167	Turner	SR 107/112 west of Monroe Rd	2,800
154	Turner	SR 107, west of Kendrick Rd	1,470
145	Irwin	SR 107 west of Jeff Davis Road	1,830

The tables used by the Georgia Regional Transportation Authority (GRTA) for reviewing Developments of Regional Impacts (DRI) provide a range of AADT volumes and their associated generalized level of service (LOS). These tables were used to compare the historical daily traffic volumes summarized in Table 5 with an expected LOS condition for the existing roadway. Each LOS definition spans from minimal delay (LOS A) to high delay (LOS F). LOS F is considered unacceptable for most drivers.

Based on the high point AADT volume of 2,800 vehicles for 2010, SR 107 currently operates acceptably (LOS B or better conditions). The light amount of traffic and minimal number of intersections provides for a good level of service based on the average daily traffic volumes along the corridor.

OPENING YEAR (2016) AND DESIGN YEAR (2036) CORRIDOR LEVEL OF SERVICE

The GRTA AADT tables were also used to evaluate the opening year (2016) and design year (2036) projected average daily traffic (ADT) volumes. The traffic flow diagrams for this project are included in Attachment A. Based on these flow diagrams, the segment with the highest ADT volume for Project STP-0000-00(311) is located between I-75 and Monroe Road and has ADT volumes of 3,400 vpd for 2016 and 4,400 vpd for 2036. For Project STP-0000-00(314), the highest ADT location is between Reagan Road and Jeff Davis Road and has ADT volumes of 2,300 vpd for 2016 and 2,900 vpd for 2036. These volumes indicate acceptable (LOS B or better conditions) operations for all widened SR 107 segments included within the study area for both 2016 and 2036 traffic conditions.

Multi-lane roadway analysis was also performed for the 2036 peak hour conditions using Highway Capacity Software (HCS), which utilizes the HCM 2000 methodology for determining expected LOS for a roadway segment. The analysis results are shown in Table 6.

Table 6
Corridor Level of Service

Project	SR 107 Location (Highest Volume)	2036	
		AM	PM
STP-0000-00(311)	Between I-75 and Monroe Road	A	A
STP-0000-00(314)	Between Reagan Road and Jeff Davis Road	A	A

BUILD ROADWAY GEOMETRY

The proposed typical section for SR 107/SR 112 consists of a rural four-lane divided highway with a 32-foot depressed grass median from Thompson Road to Jeff Davis Road. Because of historical property concerns, the project proposes an 18-foot raised median and four travel lanes with rural shoulders (four foot paved, six foot unpaved, no curb and gutter on outside right) between I-75 and Thompson Road. The proposed right-of-way will range from 170 to 220 feet in width.

The intersection of SR 107 and SR 112 currently has SR 112 as the main movement with minor street stop control on the westbound SR 107 approach. Because the higher volumes show the predominate movement is east-west along SR 107, Jacobs recommends realigning the intersection to reflect this precedence. The southbound SR 112 approach would therefore be under side street stop control if this recommendation is implemented.

SUMMARY

In order to encourage economic growth, SR 107 through Turner and Irwin Counties will be widened to a four-lane divided highway with a 32-foot depressed grass median from Thompson Road to Jeff Davis Road and an 18-foot raised median with rural shoulders (four foot paved, six foot unpaved, no curb and gutter on outside right) between I-75 and Thompson Road. Left and right turn deceleration lanes and median openings are recommended as per GDOT policy. The level of service for the corridor is expected to remain acceptable (LOS A) through the 2036 design year.

Attachment A
GDOT 2016 and 2036
Balanced Flow Diagrams

JACOBS™

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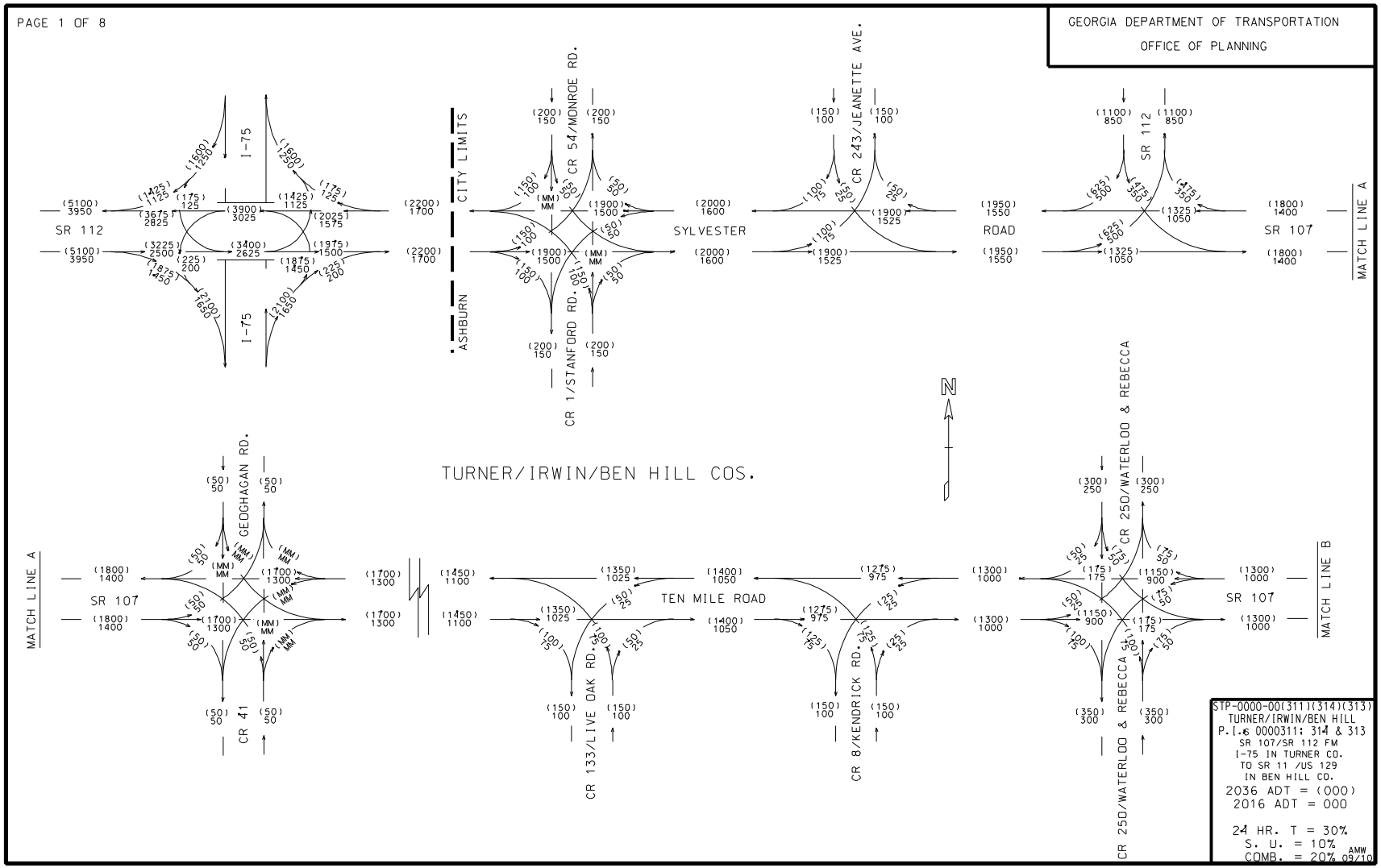

STP-0000-00(311)(314)(313)
TURNER/IRWIN/BEN HILL
P.I.s 0000311; 314 & 313
SR 107/SR 112 FM
I-75 IN TURNER CO.
TO SR 11 /US 129
IN BEN HILL CO.
2036 ADT = (000)
2016 ADT = 000

24 HR. T = 30%
S. U. = 10%
COMB. = 20%

AMW
09/10

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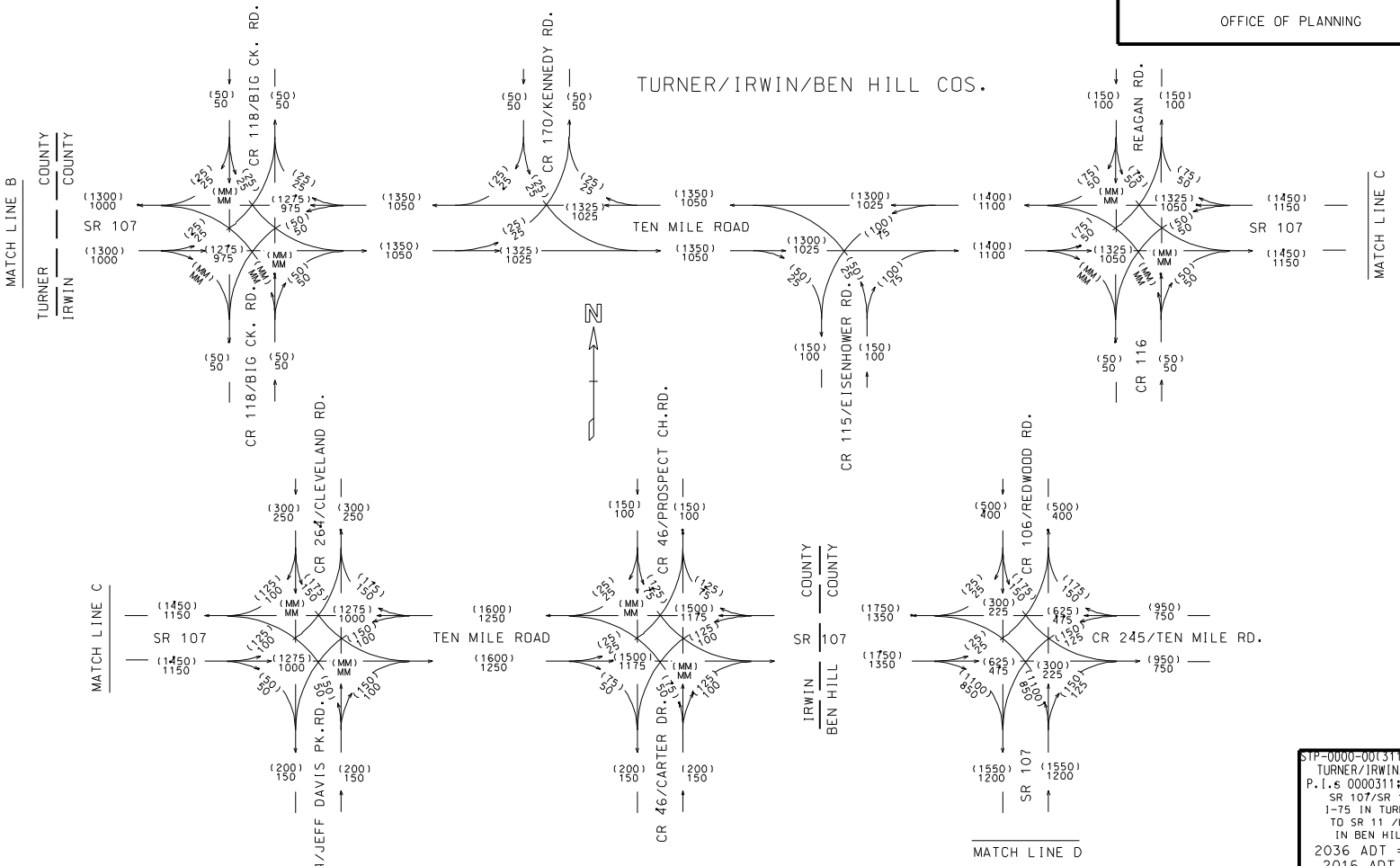
TURNER/IRWIN/BEN HILL COS.



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AMW 09/10

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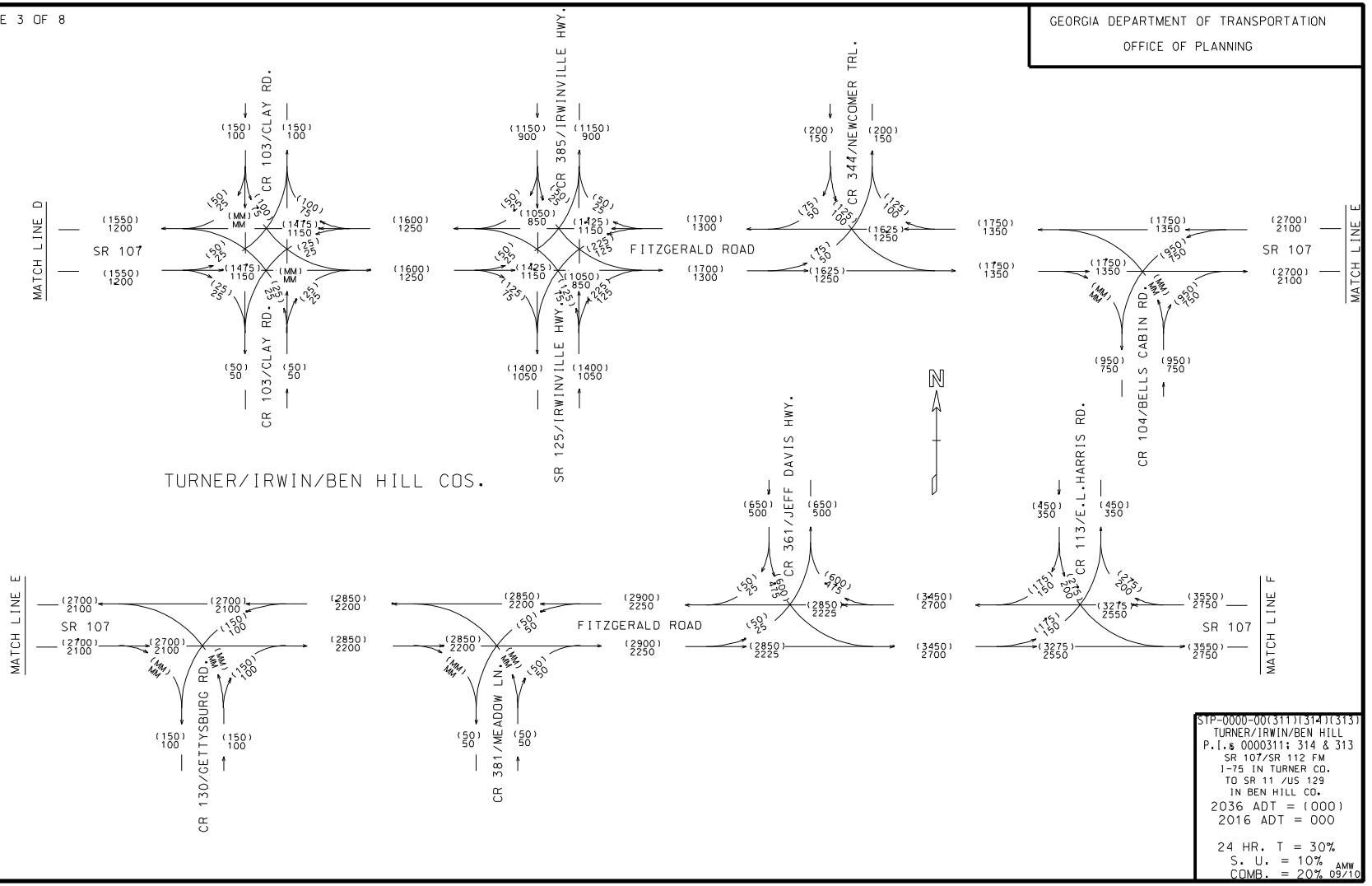

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AMW 09/10

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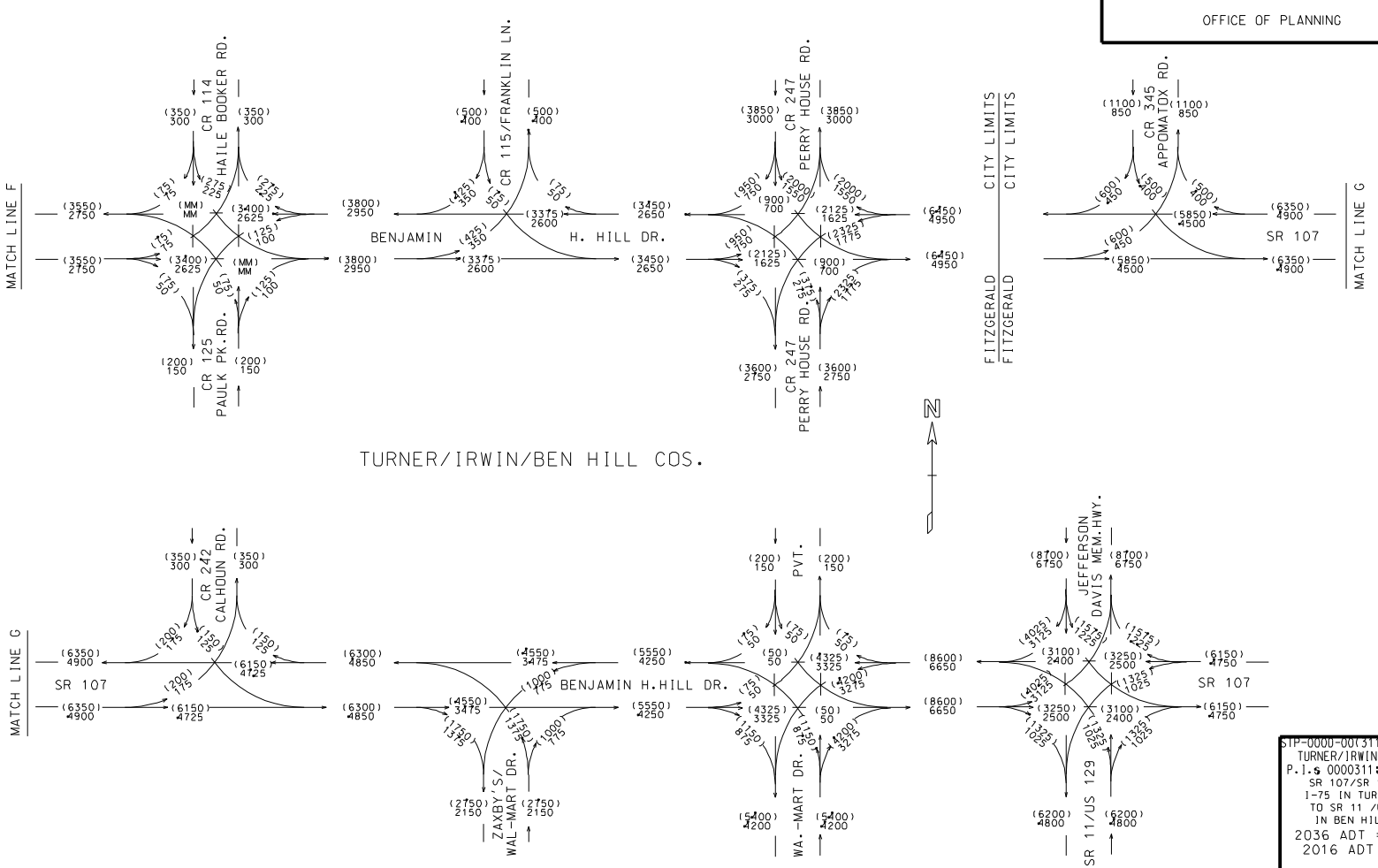

STP-0000-00(311)(314)(313)
TURNER/IRWIN/BEN HILL
P.I.s 0000311: 314 & 313
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2036 ADT = (000)
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24 HR. T = 30%
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COMB. = 20% AMW 09/10

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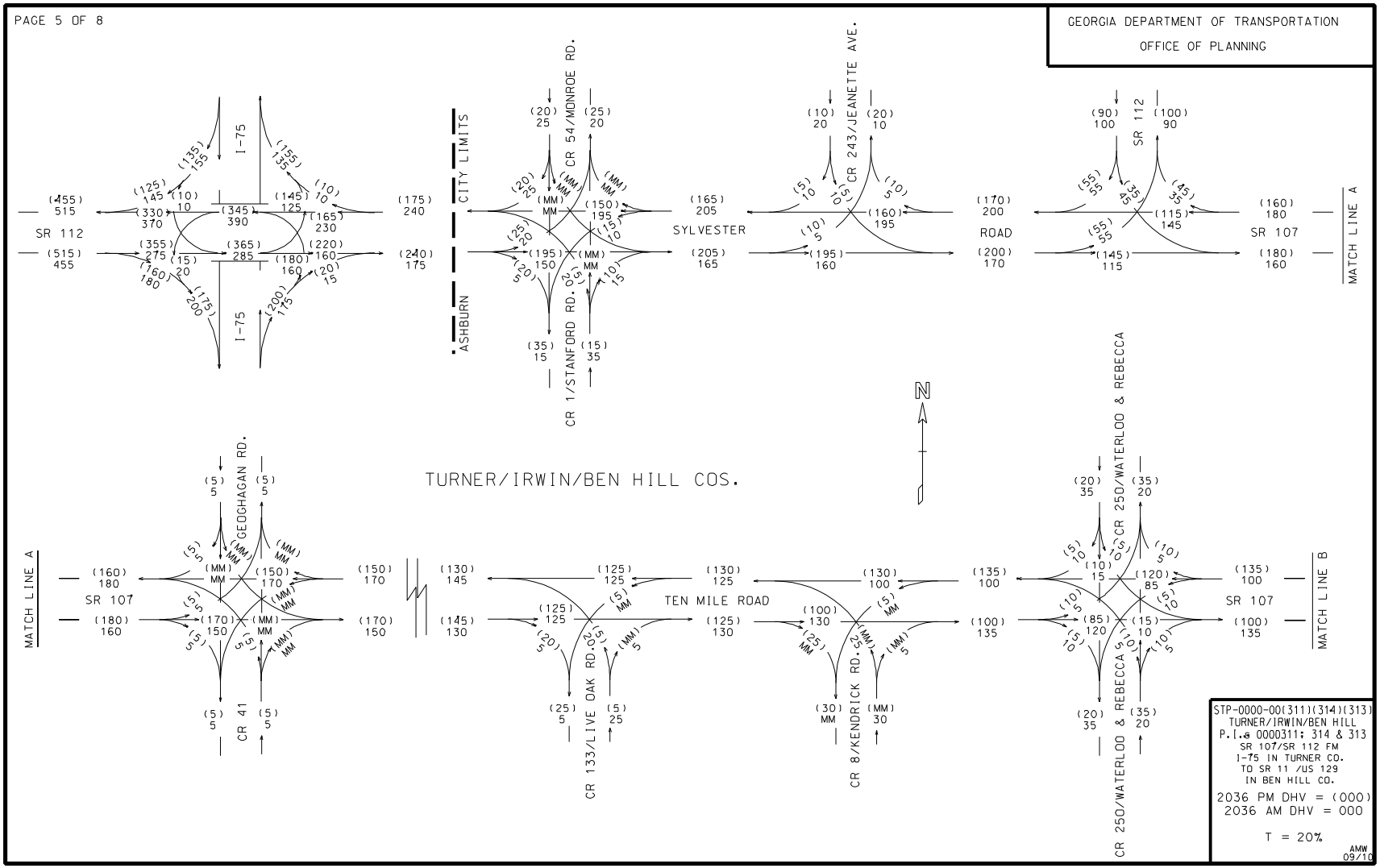

STP-0000-00(311)(314)(313)
TURNER/IRWIN/BEN HILL
P.I.s 0000311: 314 & 313
SR 107/SR 112 FM
I-75 IN TURNER CO.
TO SR 11 /US 129
IN BEN HILL CO.

2036 PM DHV = (000)
2036 AM DHV = 000

T = 20%

AMW
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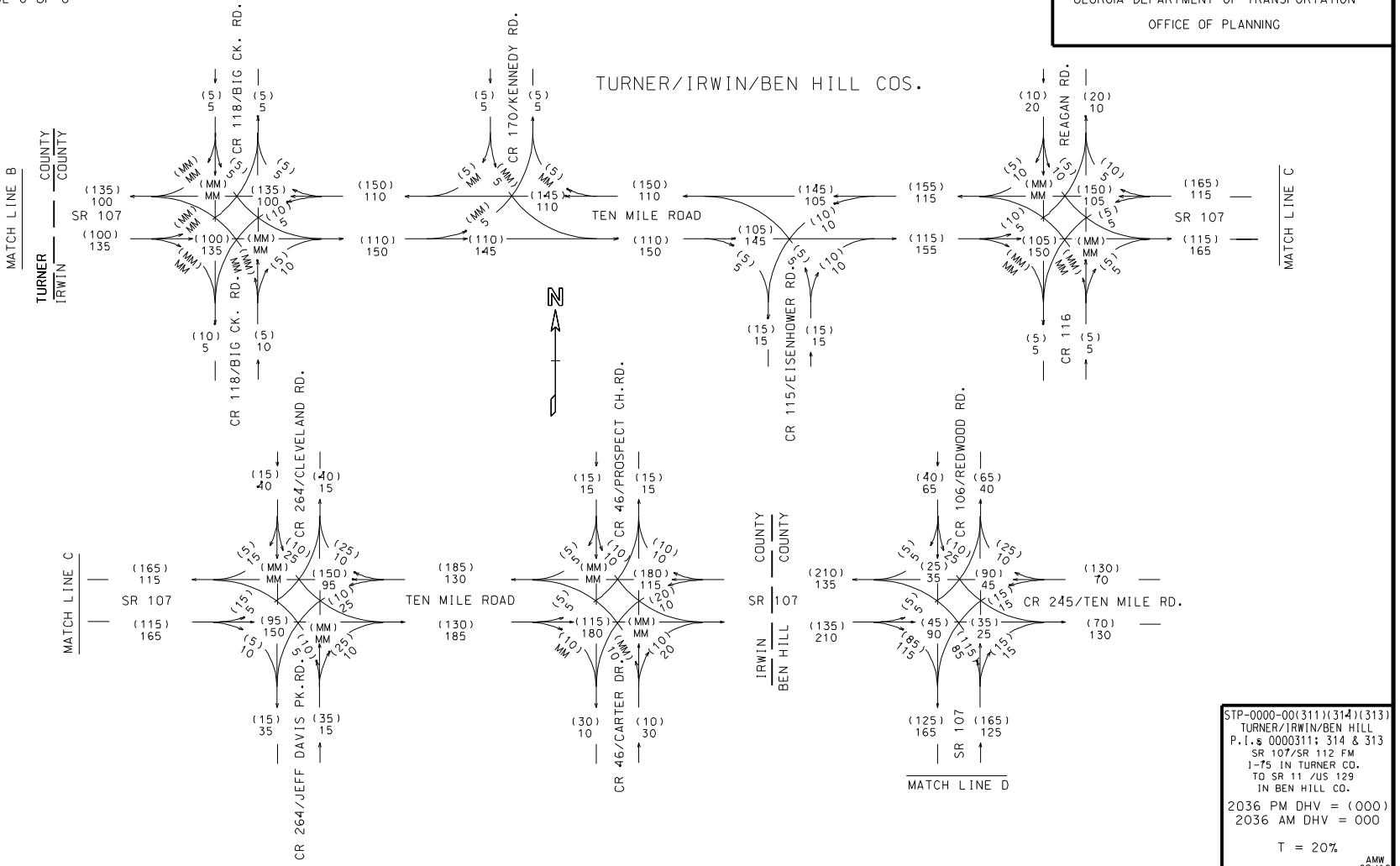
TURNER/IRWIN/BEN HILL COS.



STP-0000-00(311)(314)(313)
TURNER/IRWIN/BEN HILL
P.I.s 0000311; 314 & 313
SR 107/SR 112 FM
I-75 IN TURNER CO.
TO SR 11 /US 129
IN BEN HILL CO.

2036 PM DHV = (000)
2036 AM DHV = 000

T = 20%

AMW
09/10

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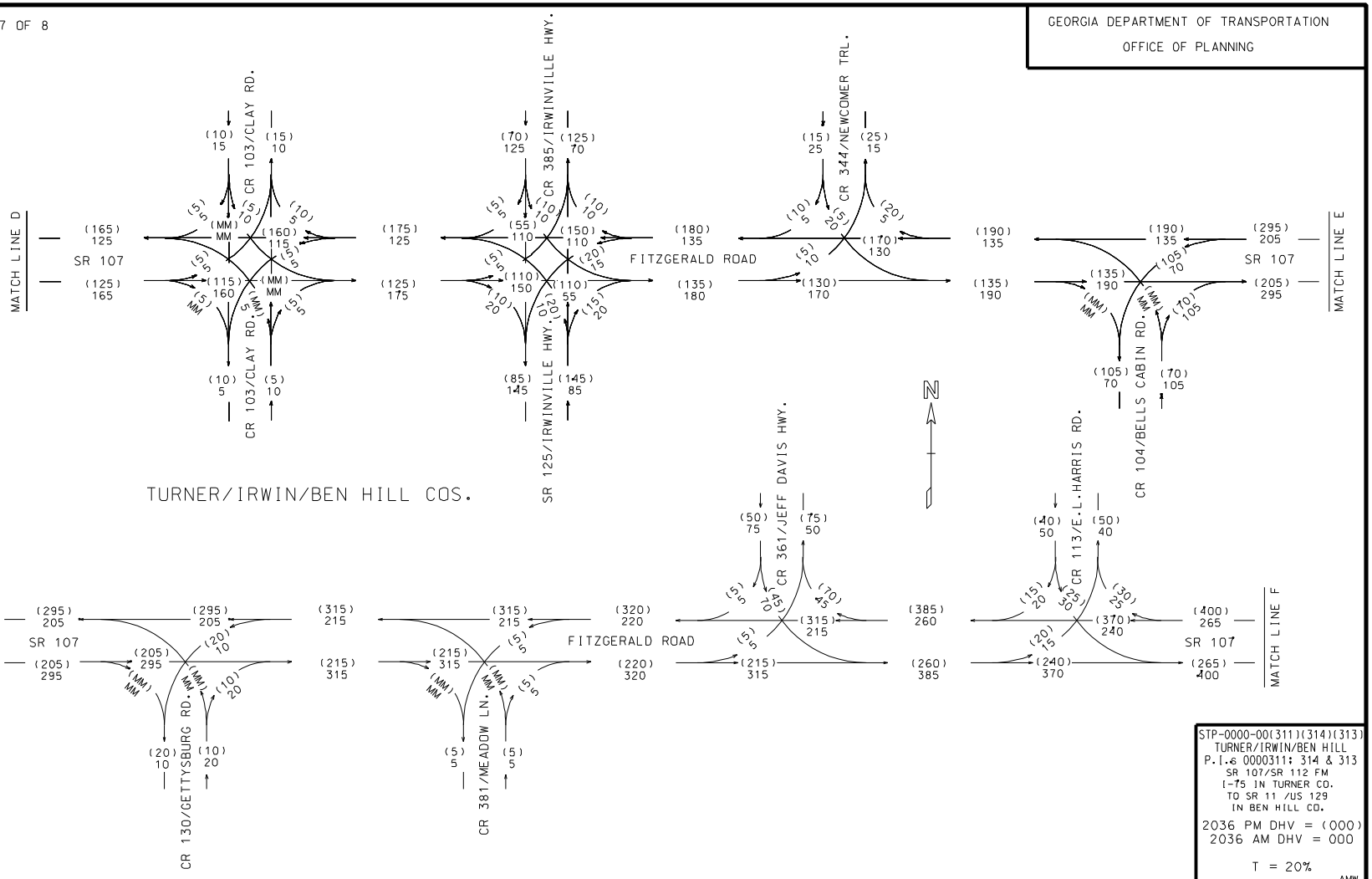

STP-0000-00(311)(314)(313)
TURNER/IRWIN/BEN HILL
P.I.s 0000311: 314 & 313
SR 107/SR 112 FM
I-75 IN TURNER CO.
TO SR 11 /US 129
IN BEN HILL CO.

2036 PM DHV = (000)
2036 AM DHV = 000

T = 20%

AMW
09/10

GEORGIA DEPARTMENT OF TRANSPORTATION
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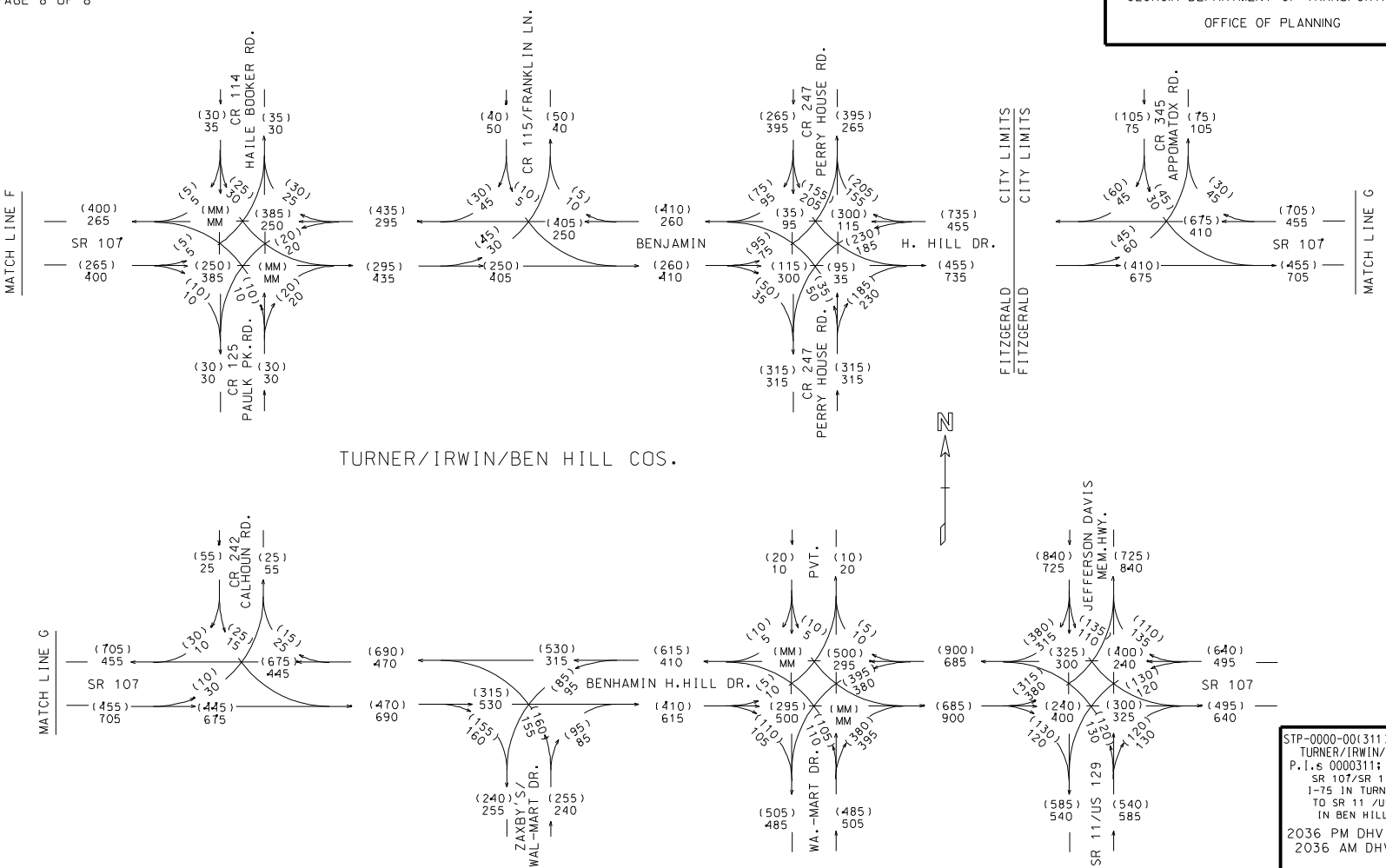

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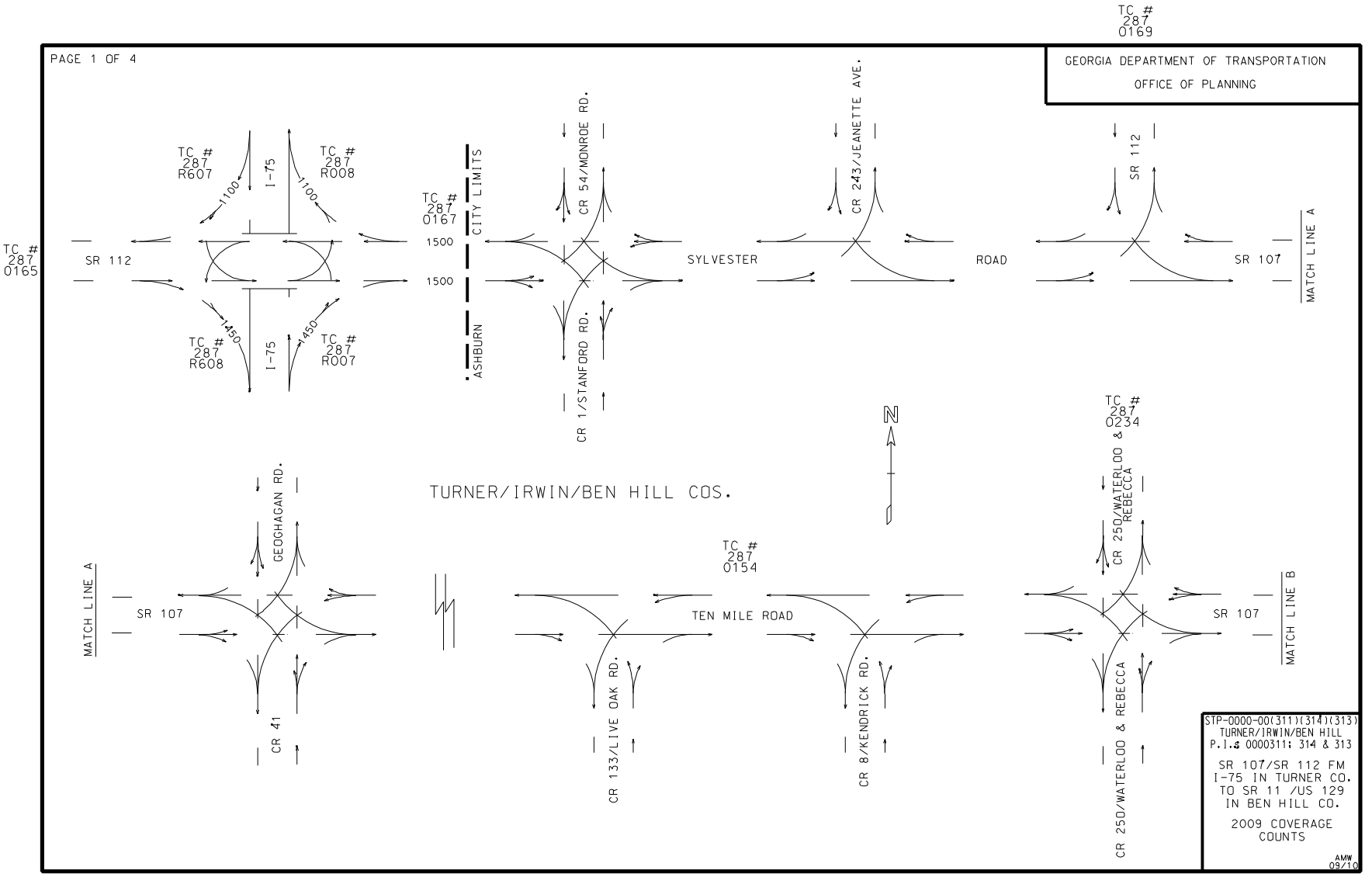
TURNER/IRWIN/BEN HILL
P.I.s 0000311; 314 & 313
SR 107/SR 112 FM
I-75 IN TURNER CO.
TO SR 11 /US 129
IN BEN HILL CO.

2036 PM DHV = (000)
2036 AM DHV = 000

T = 20%

AMW
09/10


PAGE 1 OF 4
GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING
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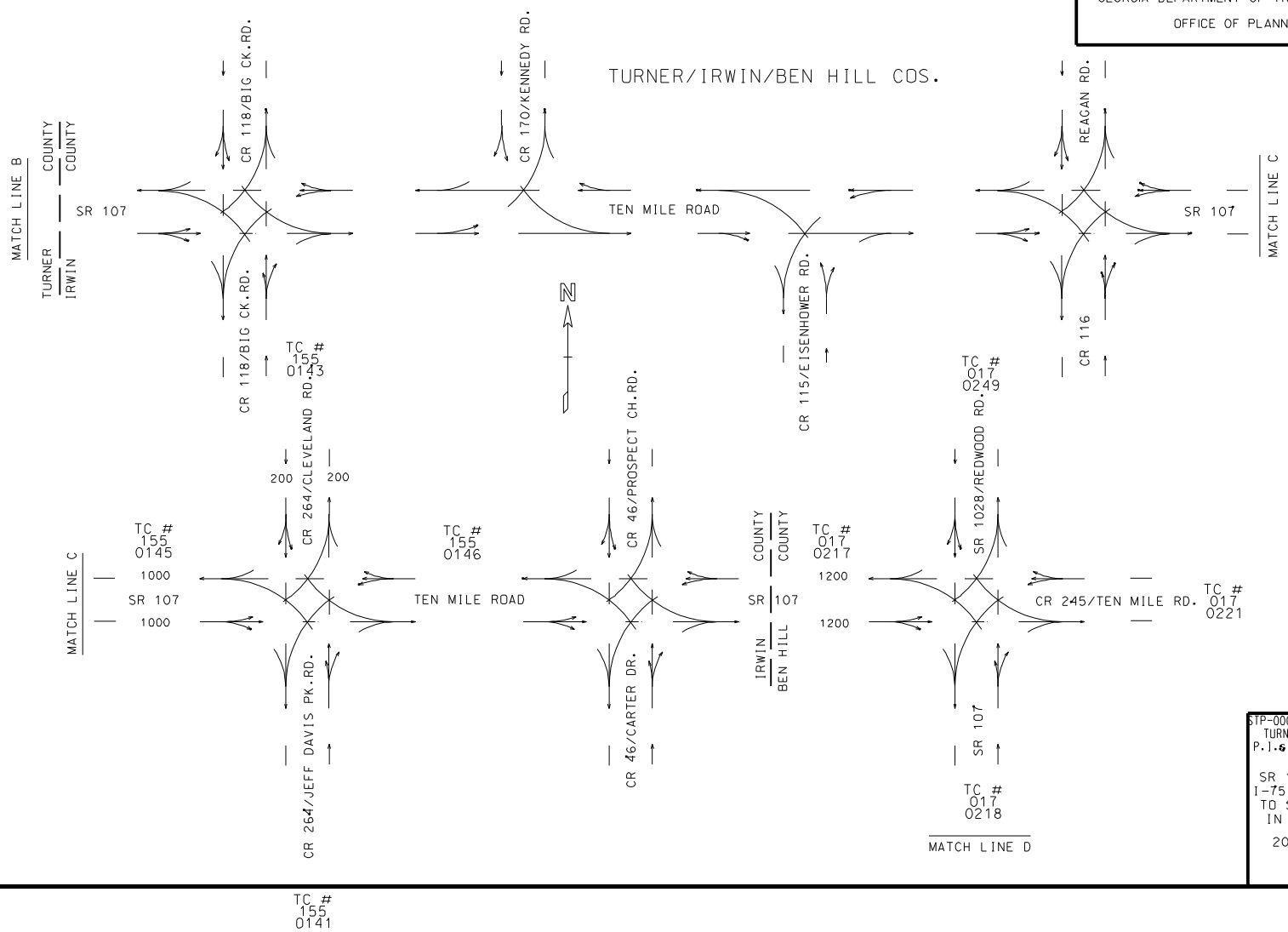
SR 112
TC # 287 R607
TC # 287 R008
I-75
1100
1100
TC # 287 R608
TC # 287 R007
I-75
1450
1450
TC # 287 0167
CITY LIMITS
ASHBURN
1500
1500
CR 54/MONROE RD.
CR 1/STANFORD RD.
CR 243/JEANETTE AVE.
SYLVESTER
ROAD
SR 112
SR 107
MATCH LINE A
TURNER/IRWIN/BEN HILL COS.
N
MATCH LINE A
SR 107
GEOGHAGAN RD.
CR 41
TC # 287 0154
TEN MILE ROAD
CR 133/LIVE OAK RD.
CR 8/KENDRICK RD.
TC # 287 0234
CR 250/WATERLOO & REBECCA
CR 250/WATERLOO & REBECCA
SR 107
MATCH LINE B
STP-0000-00(311)(314)(313)
TURNER/IRWIN/BEN HILL
P.I.s 0000311; 314 & 313
SR 107/SR 112 FM
I-75 IN TURNER CO.
TO SR 11 /US 129
IN BEN HILL CO.
2009 COVERAGE
COUNTS
AMW
09/10

GEORGIA DEPARTMENT OF TRANSPORTATION
OFFICE OF PLANNING

TURNER/IRWIN/BEN HILL COS.



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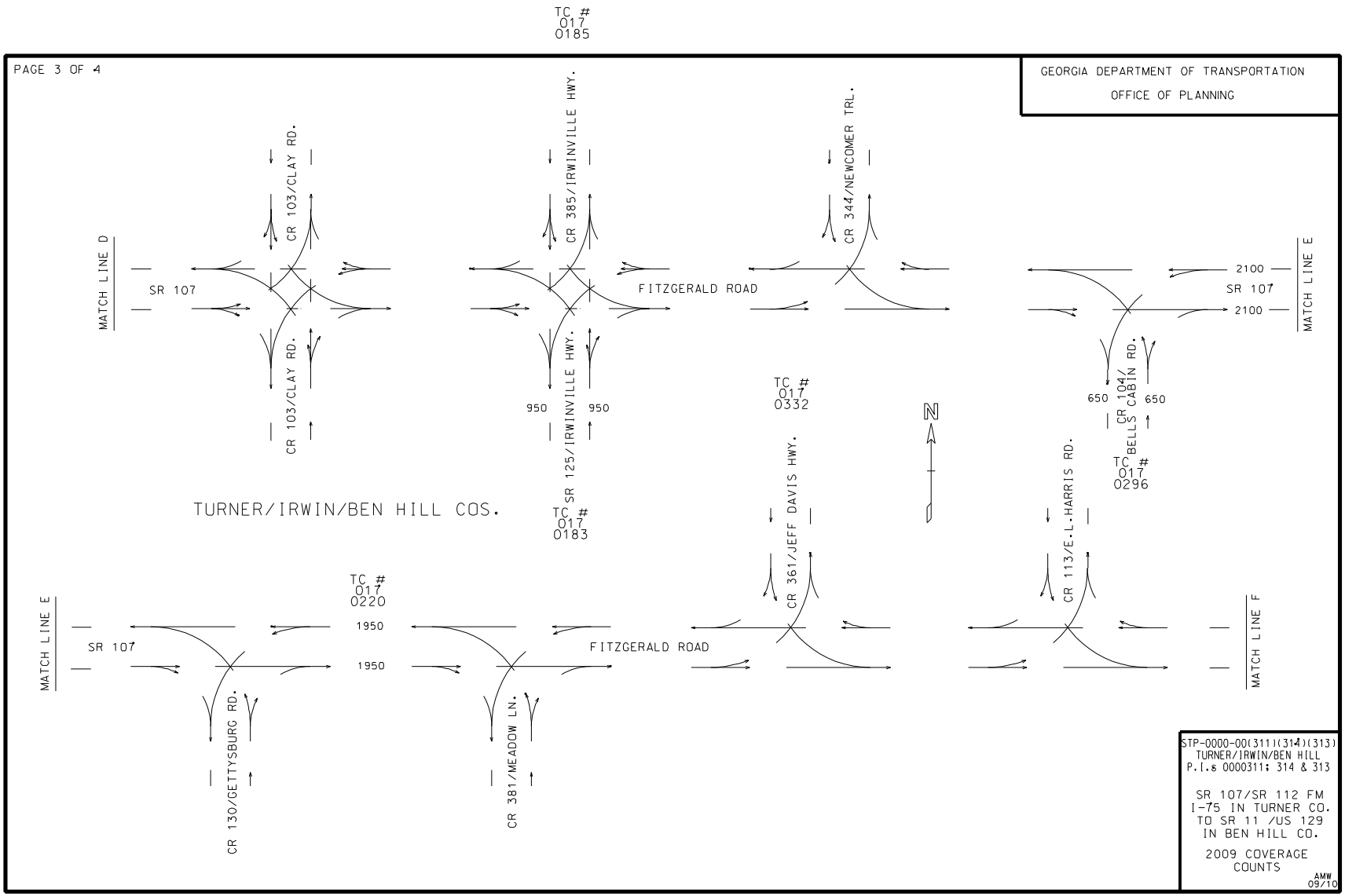

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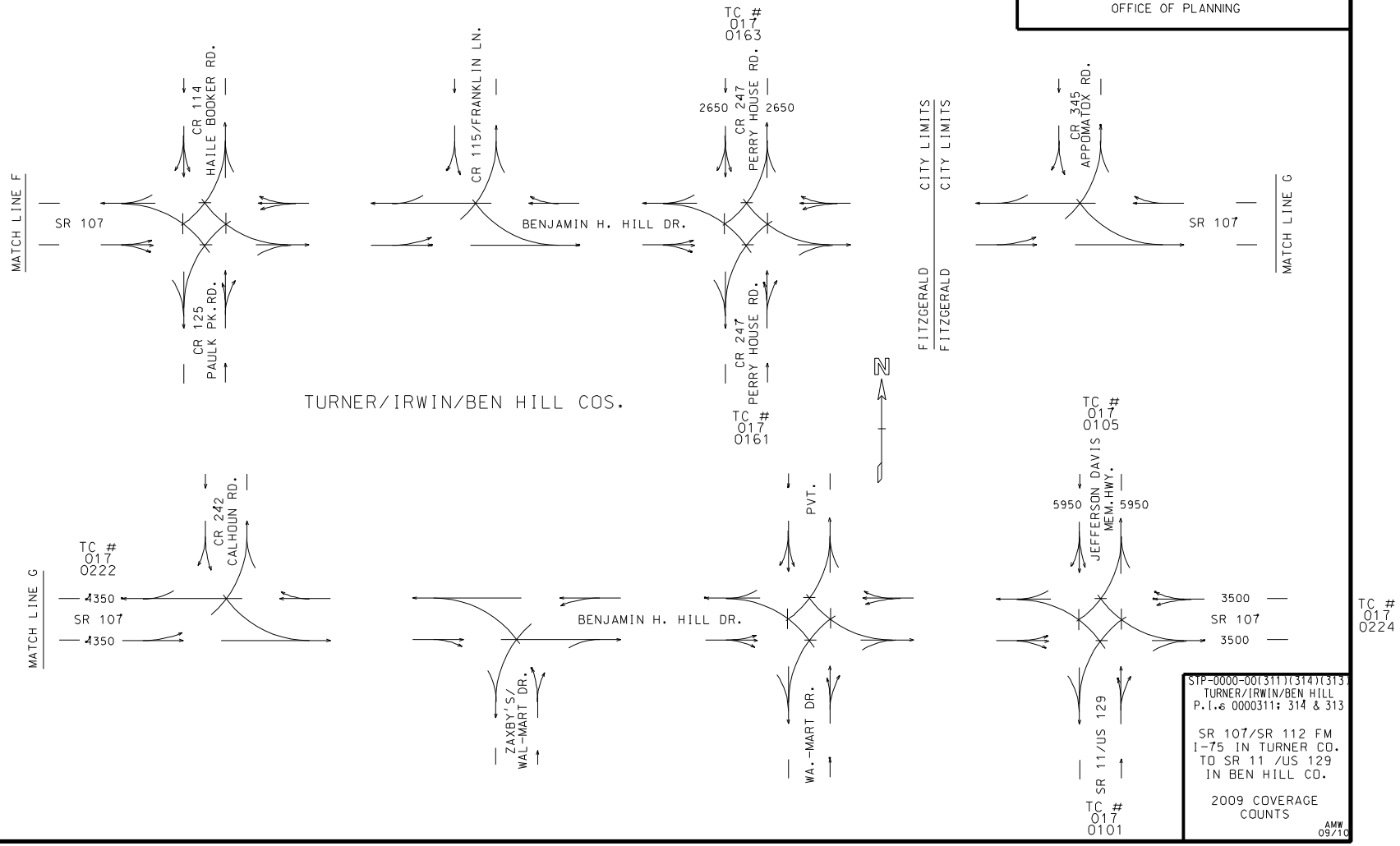

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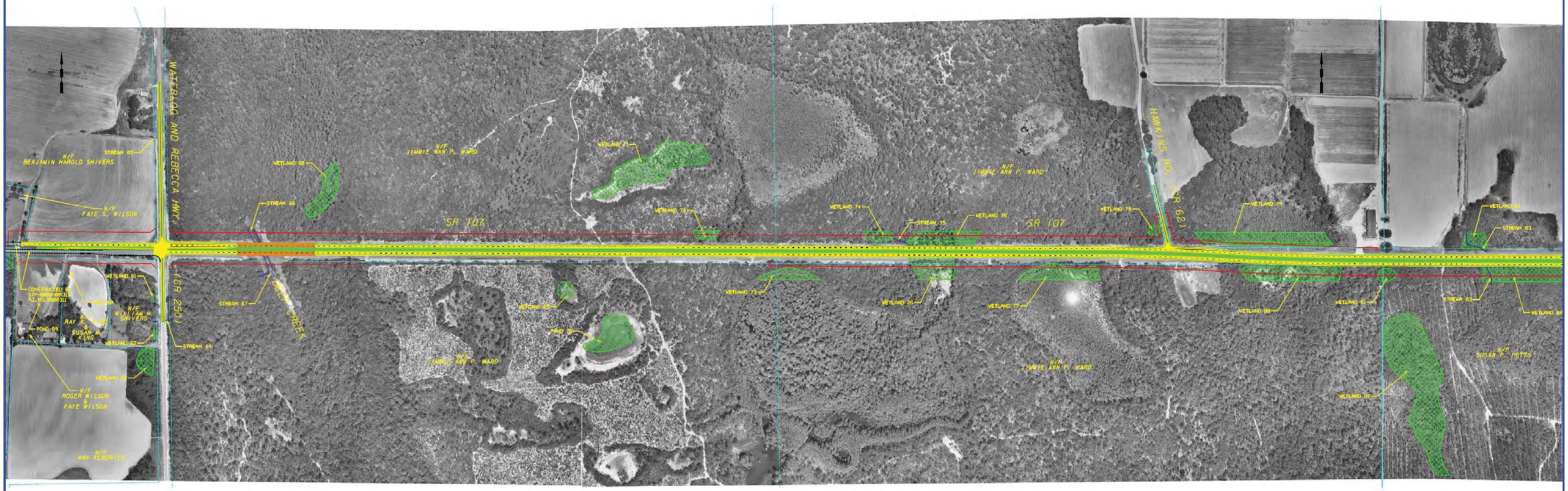
GDOT
Georgia Department of Transportation

LEGEND
LANE
ROADWAY
MEDIAN
PROPOSED RIGHT OF WAY
EXISTING RIGHT OF WAY AND PROPERTY LINE
HISTORIC PROPERTY
DISPLACEMENT
BRIDGE
WETLANDS
STREAM

SCALE IN FEET
0 200 400 800

N



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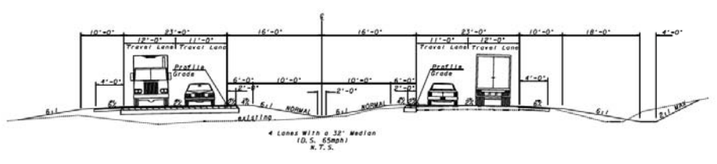

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SCALE IN FEET
0 200 400 800

REVISED CONCEPT LAYOUT
STP-0000-00(314)
P.I. 0000314
TURNER & IRWIN COUNTY
SR 107 FROM CR 250 TO CR 264
DECEMBER 2011

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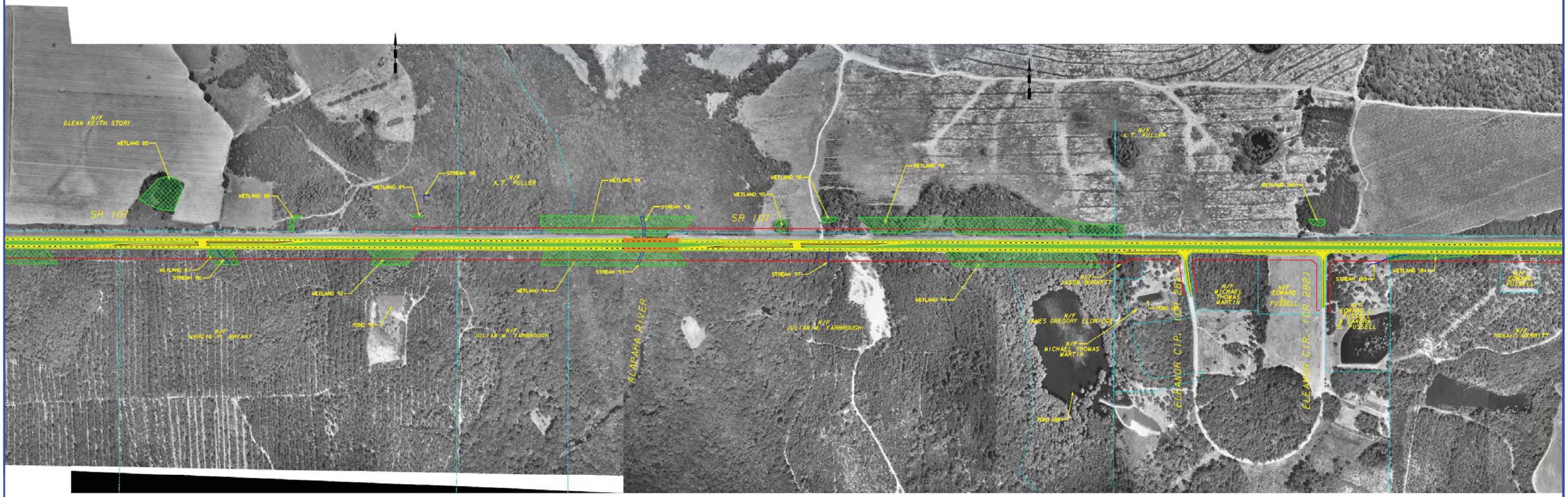
GDOT
Georgia Department of Transportation

LEGEND
- ROADWAY (LANE, MEDIAN)
- PROPOSED RIGHT OF WAY
- EXISTING RIGHT OF WAY AND PROPERTY LINE
- HISTORIC PROPERTY
- DISPLACEMENT
- BRIDGE
- WETLANDS
- STREAM

SCALE IN FEET
0 200 400 800

N



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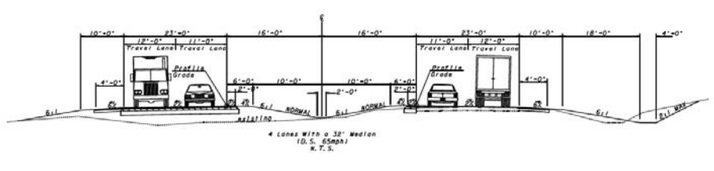

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SCALE IN FEET
0 200 400 800

REVISED CONCEPT LAYOUT
STP-0000-00(314)
P.I. 0000314
TURNER & IRWIN COUNTY
SR 107 FROM CR 250 TO CR 264
DECEMBER 2011

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Georgia Department of Transportation

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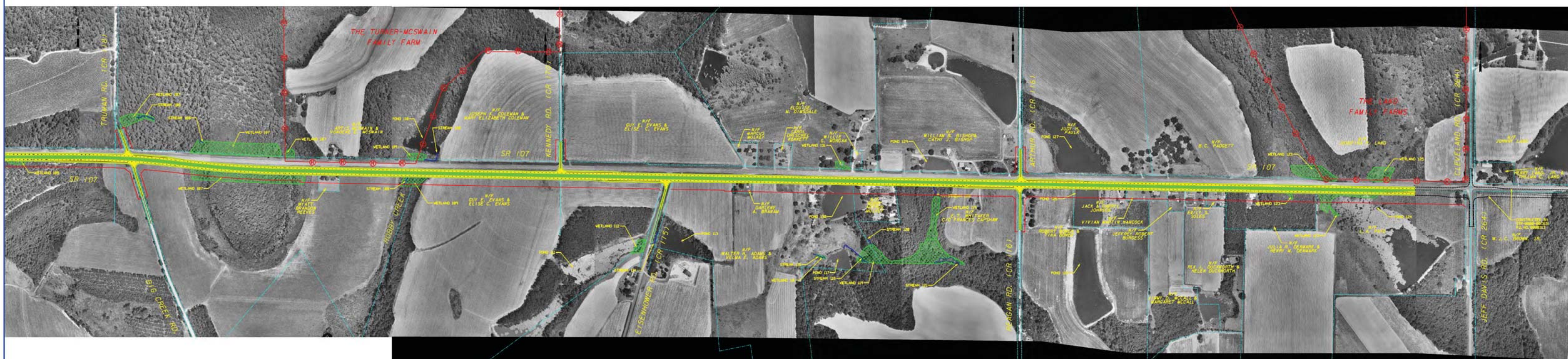

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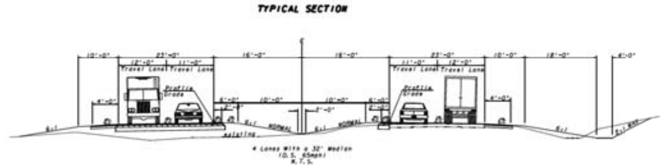
TYPICAL SECTION



REVISED CONCEPT LAYOUT
STP-0000-00(314)
P.I. 0000314
TURNER & IRWIN COUNTY
SR 107 FROM CR 250 TO CR 264
DECEMBER 2011

DEPARTMENT OF TRANSPORTATION
STATE OF GEORGIA

INTERDEPARTMENT CORRESPONDENCE

FILE: STP00-0000-00(311)(313)(314)
Turner Ben Hill Irwin
P.I. Nos.: 0000311 0000313 0000314
SR 107 from I-75 to SR 11/US 129

OFFICE: Engineering Services

DATE: January 28, 2010

FROM: Ronald E. Wishon, Project Review Engineer REW

TO: Bobby K. Hilliard, PE, State Program Delivery Engineer
Attn.: Peter Emmanuel

SUBJECT: IMPLEMENTATION OF VALUE ENGINEERING STUDY ALTERNATIVES

The VE Study for the above projects was held August 10-13, 2009. Responses were received on January 7, 2010 and revised responses were received on January 27, 2010. Recommendations for implementation of Value Engineering Study Alternatives are indicated in the table below. The Project Manager shall incorporate the VE alternatives recommended for implementation to the extent reasonable in the design of the project.

ALT #	Description	Potential Savings/LCC	Implement	Comments
STP00-0000-00(311) Turner PI No. 0000311				
T-2	Use intermittent passing lanes in lieu of a four lane rural divided section from I-75 to CR 250	$24,316,393	No	The use of intermittent passing lanes does not meet the need and purpose of the project. Retaining the proposed four-lane divided typical section would promote economic development and enhance the movement of goods.
T-3	Use a 32 ft rural grassed median in lieu of a 44 ft rural grassed median	$633,902	Yes	This will be done.
T-4	Use an 18 ft raised median in lieu of a 24 ft raised median in urban sections	$148,310	Yes	This will be done.
T-6	Use 4 ft paved shoulders in lieu of 6 ½ ft paved shoulders	$741,609	Yes	This will be done.
T-8	Use 24 in curb and gutter in lieu of 30 in curb and gutter	$21,450	Yes	This will be done.

T-9	Use 11 ft inside lanes in lieu of 12 ft lanes	Proposed = $460,020 Actual = $253,000	Yes, partially	SR 107 from I-75 to CR 205 has 3 long curves that will require 12 foot lanes due to the high truck percentages. Twelve foot lanes will be used through the last curve. The final four miles of the project, up to CR 250, will use 11 foot inside lanes as proposed by the VE Team.
T-11	Extend the existing three lane section at I-75 to just east of Thompson Road	Design Suggestion	No	The VE Team believed that this design would mitigate an adverse effect on the historic house on the south side of SR 107; however, the existing edge of pavement cannot be held on the north side since a 20 ft clear zone is required for a 55 MPH speed. Using a 3 lanes section in this area would not eliminate the impacts to the historic property.
G-1	Shorten the left turn lanes to the minimum allowable deceleration length	$219,912	Yes	This will be done.
G-2	Use Type A median openings instead of Type B	$1,000,263	No	Based on traffic volumes and typical crash types along this corridor, the Office of Traffic Operations recommends the use of Type B openings along this corridor. Type B median openings perform better for both safety and operational reasons, especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance.
G-3	Eliminate the Firetower Road connector at Sta. 226+63 by reusing the existing intersection at Jeannette Road	$57,564	Yes	This will be done.
G-5	Block Geoghagen Road (CR 41) just to the north of proposed SR 107	$25,298	Yes	This will be done.
G-8	Minimize improvements to Live Oak Road and relocate median opening to align with Live Oak Road in its new location	$90,117	Yes	This will be done.

G-14	Eliminate median openings at Sta. 304+70 and Sta. 334+00 and replace with a single median opening at Sta. 319+35	$216,322	Yes	The median openings will be closed as proposed by the VE Team. The new median opening will be located between Sta. 315+00 and 316+00 which provides increased sight distance than Sta. 319+35.
STP00-0000-00(313) Irwin Ben Hill PI No. 0000313				
T-1	Use a three lane rural section in lieu of a four lane urban divided section	$4,059,230	No	The need and purpose for this project is focused on economic development and intermittent passing lanes would not satisfy this need. Based on the projected LOS, a four lane section is recommended for this corridor. The Chief Engineer has given approval for this project as a 4 lane GRIP style corridor.
T-2	Use intermittent passing lanes in lieu of a four lane rural divided section	$12,741,906	No	The need and purpose for this project is focused on economic development and intermittent passing lanes would not satisfy this need. The Chief Engineer has given approval for this project as a 4 lane GRIP style corridor.
T-3	Use a 32 ft rural grassed median in lieu of a 44 ft rural grassed median	$615,328	Yes	This will be done.
T-4	Use an 18 ft raised median in lieu of a 24 ft raised median in urban sections	$160,657	Yes	This will be done.
T-5	Use 12 ft urban shoulders in lieu of 16 ft urban shoulders	$93,571	Yes	This will be done.
T-6	Use 4 ft paved shoulders in lieu of 6 ½ ft paved shoulders	$653,201	Yes	This will be done.
T-7	Eliminate sidewalks from the urban section	$505,257	No	T-10 will be implemented; therefore, T-7 cannot be done.
T-8	Use 24 in curb and gutter in lieu of 30 in curb and gutter	$50,262	Yes	This will be done.

T-9	Use 11 ft inside lanes in lieu of 12 ft lanes	$659,661	No	Several factors preclude the use of 11 foot lanes on this section of the project. AASHTO recommends 12 foot lanes for higher speed designs, roadways with a significant number of curves, and relatively high truck traffic. Portions of the project will utilize a 65 MPH speed design. Truck traffic is projected to be 30%. The proposed geometry of the roadway would require tapering the inside lane from 11 feet to the required 12 feet throughout the curves. This design would be difficult to construct.
T-10	Eliminate the sidewalk from the south side of the urban section	$265,028	Yes	This will be done.
D-1	Use HDPE pipe in lieu of RCP for longitudinal drainage	$161,116	No	The contractor is incentivized to use the least expensive of the materials specified in the Pipe Culvert Materials Alternatives Chart.
G-1	Shorten the left turn lanes to the minimum allowable deceleration length	$459,878	Yes	This will be done.
G-2	Use Type A median openings instead of Type B	$759,220	No	Based on traffic volumes and typical crash types along this corridor, the Office of Traffic Operations recommends the use of Type B openings along this corridor. Type B median openings perform better for both safety and operational reasons, especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance.
G-17	Reduce the speed limit to 55 mph at Van Buren/Webster Road and shorten the curve radius at Sta. 364+09	Proposed = $191,880 Actual = $124,166	Yes, with modifications	Reduction of the speed design is not required in order to shorten the curve radii. A historic resource is located on the north side of SR 107 in the vicinity of this proposed recommendation. The curve radii can be reduced to a minimum of 2600 ft and still avoid impacts to the property.

STP00-0000-00(314) Turner Irwin PI No. 0000314				
T-2	Use intermittent passing lanes in lieu of a four lane rural divided section	$32,578,455	No	The use of intermittent passing lanes does not meet the need and purpose of the project. Retaining the proposed four-lane divided typical section would promote economic development and enhance the movement of goods.
T-3	Use a 32 ft rural grassed median in lieu of a 44 ft rural grassed median	$628,569	Yes	This will be done.
T-6	Use 4 ft paved shoulders in lieu of 6 ½ ft paved shoulders	$681,424	Yes	This will be done.
T-9	Use 11 ft inside lanes in lieu of 12 ft lanes	$737,105	Yes	This will be done.
B-2	Use a Type A median crossover and shorten the WB turn lane to Rebecca Waterloo Highway so it does not affect the bridge over Deep Creek	$417,850	Yes	This will be done to the extent possible. The final length and location of the bridge has not been determined, but a Type A median crossover and shorter turn lane will be implemented as described. Once the final hydraulic study is completed, any possible modifications to the bridge will be determined.
G-1	Shorten the left turn lanes to the minimum allowable deceleration length	$500,069	Yes	This will be done.
G-2	Use Type A median openings instead of Type B	$1,061,460	No	Based on traffic volumes and typical crash types along this corridor, the Office of Traffic Operations recommends the use of Type B openings along this corridor. Type B median openings perform better for both safety and operational reasons, especially at high speeds. This is mainly due to the offset nature of the left turn lane, creating better operational sight distance.
G-10	Maintain the existing alignment at Hawkins Road	$72,164	Yes	This will be done.

G-11	Maintain Eleanor Circle at the existing alignment at Sta. 313+38	$63,174	Yes	This will be done.
G-12	Maintain the existing alignment at the Big Creek/Truman Road intersection	$309,762	Yes	This will be done.
G-13	Maintain the existing alignment at Eisenhower Road	$70,778	Yes	This will be done.
G-14	Eliminate the median openings at Sta. 214+80, 258+40 and 288+00 and replace them with openings at Sta. 233+53 and 273+91	$208,687	Yes, with modifications	The number of median openings in this area will be reduced from three to two; however, the median openings will be located at Sta. 239+00 and Sta. 284+00 instead of the locations proposed by the VE Team. Sta. 273+91 is located on the bridge over the Alapaha River and shifting the opening to Sta. 284+00 locates it as far west as possible without placing the turn lanes on the bridge. Sta. 239+00 is equidistant between Hawkins Road/CR 62 and Sta. 284+00.

The Office of Engineering Services concurs with the Project Manager's responses.

Approved: Dell MRoss **Date:** 2/1/10

Gerald M. Ross, PE, Chief Engineer

REW/LLM
Attachments
c: Ben Buchan
Paul Liles/Bill Duvall/Bill Ingalsbe/Shaun Williams
Bobby Hilliard/Mike Haithcock/Peter Emmanuel/Kimberly Nesbitt
Amber Phillips
Joe Cowan
Nabil Raad
Lisa Myers
Matt Sanders